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# Cheatham, Old Hickory, and J. Percy Priest Reservoirs; Cheatham, Davidson, Sumner, Wilson Smith, Trousdale, and Rutherford Counties, Tennessee

National Eutrophication Survey, Las Vegas, Nev.

Prepared for

Corvallis Environmental Research Lab, Oreg.

Dec 76

PB 265 587

# U.S. ENVIRONMENTAL PROTECTION AGENCY
# NATIONAL EUTROPHICATION SURVEY

**WORKING PAPER SERIES**

REPORT
ON
CHEATHAM, OLD HICKORY, AND
J. PERCY PRIEST RESERVOIRS
CHEATHAM, DAVIDSON, SUMNER, WILSON
SMITH, TROUSDALE, AND RUTHERFORD COUNTIES
TENNESSEE
EPA REGION IV
WORKING PAPER No. 444

**CORVALLIS ENVIRONMENTAL RESEARCH LABORATORY - CORVALLIS, OREGON**

**and**

**ENVIRONMENTAL MONITORING & SUPPORT LABORATORY - LAS VEGAS, NEVADA**

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# REPORT
# ON
# CHEATHAM, OLD HICKORY, AND J. PERCY PRIEST RESERVOIRS
# CHEATHAM, DAVIDSON, SUMNER, WILSON SMITH, TROUSDALE, AND RUTHERFORD COUNTIES TENNESSEE

EPA REGION IV

WORKING PAPER No. 444

WITH THE COOPERATION OF THE

TENNESSEE DEPARTMENT OF PUBLIC HEALTH

AND THE

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Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

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# REPORT ON CHEATHAM, OLD HICKORY, AND J. PERCY PRIEST RESERVOIRS

CHEATHAM, DAVIDSON, SUMNER, WILSON, SMITH,
TROUSDALE, AND RUTHERFORD COUNTIES, TENNESSEE

EPA REGION IV

by

National Eutrophication Survey

Water and Land Monitoring Branch
Monitoring Applications Laboratory
Environmental Monitoring & Support Laboratory
Las Vegas, Nevada

and

Eutrophication Survey Branch
Corvallis Environmental Research Laboratory
Corvallis, Oregon

Working Paper No. 444

OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY

December 1976

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# FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs.

## OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point source discharge reduction and nonpoint source pollution abatement in lake watersheds.

## ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

## LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's freshwater lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by the U.S. Environmental Protection Agency and to augment plans implementation by the states.

## ACKNOWLEDGMENTS

The staff of the National Eutrophication Survey (Office of Research and Development, U.S. Environmental Protection Agency) expresses sincere appreciation to the Tennessee Department of Public Health for professional involvement, to the Tennessee National Guard for conducting the tributary sampling phase of the Survey, and to those Tennessee wastewater treatment plant operators who provided effluent samples and flow data.

The staff of the Division of Water Quality Control, Tennessee Department of Public Health; the Division of Environmental Planning, Tennessee Valley Authority; and the Nashville District Corps of Engineers provided invaluable lake documentation and counsel during the Survey, reviewed the preliminary reports and provided critiques most useful in the preparation of this Working Paper series.

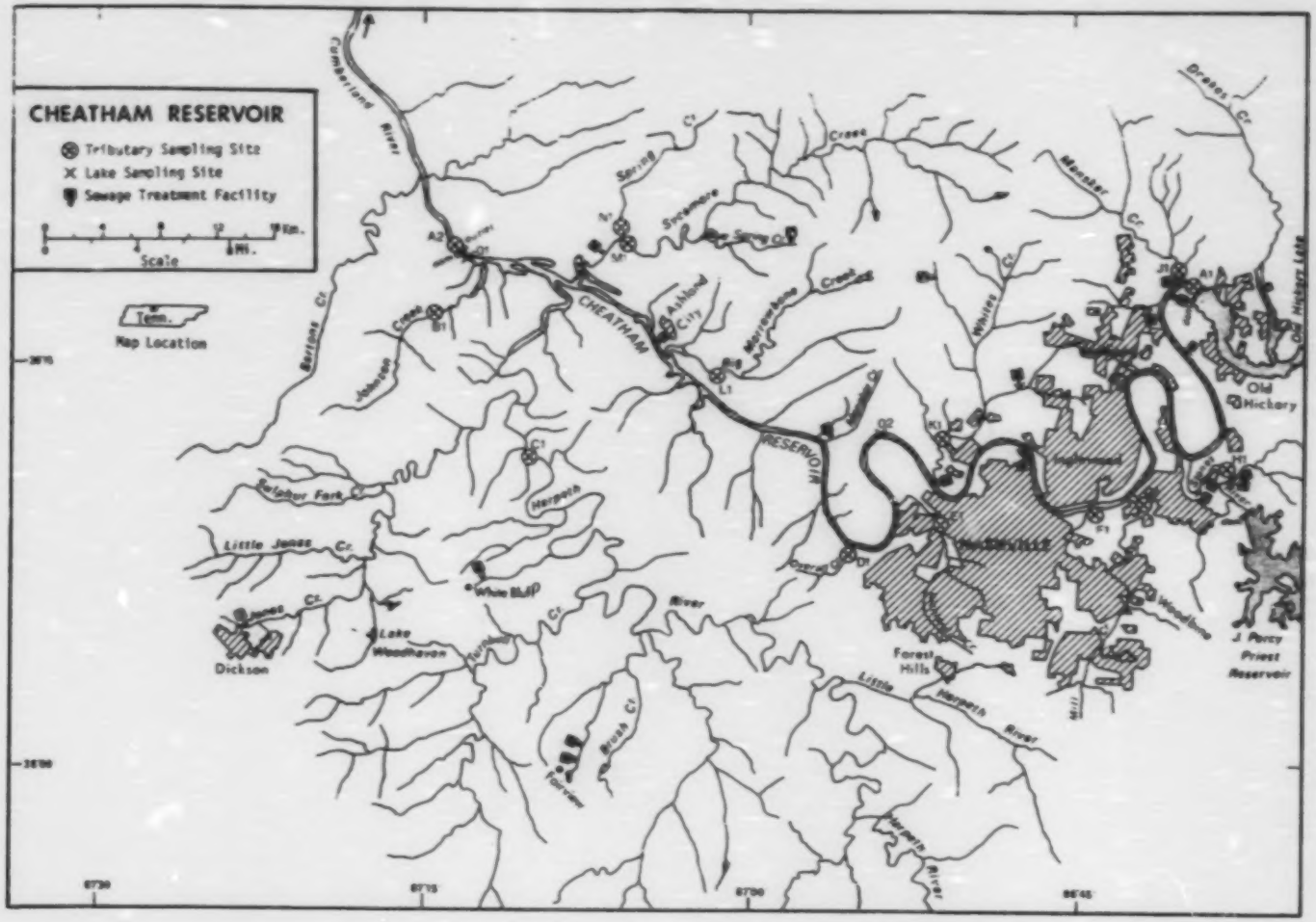
Major General William C. Smith, former Adjutant General of Tennessee, and Project Officer Colonel Wilburn C. Johnson, who directed the volunteer efforts of the Tennessee National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

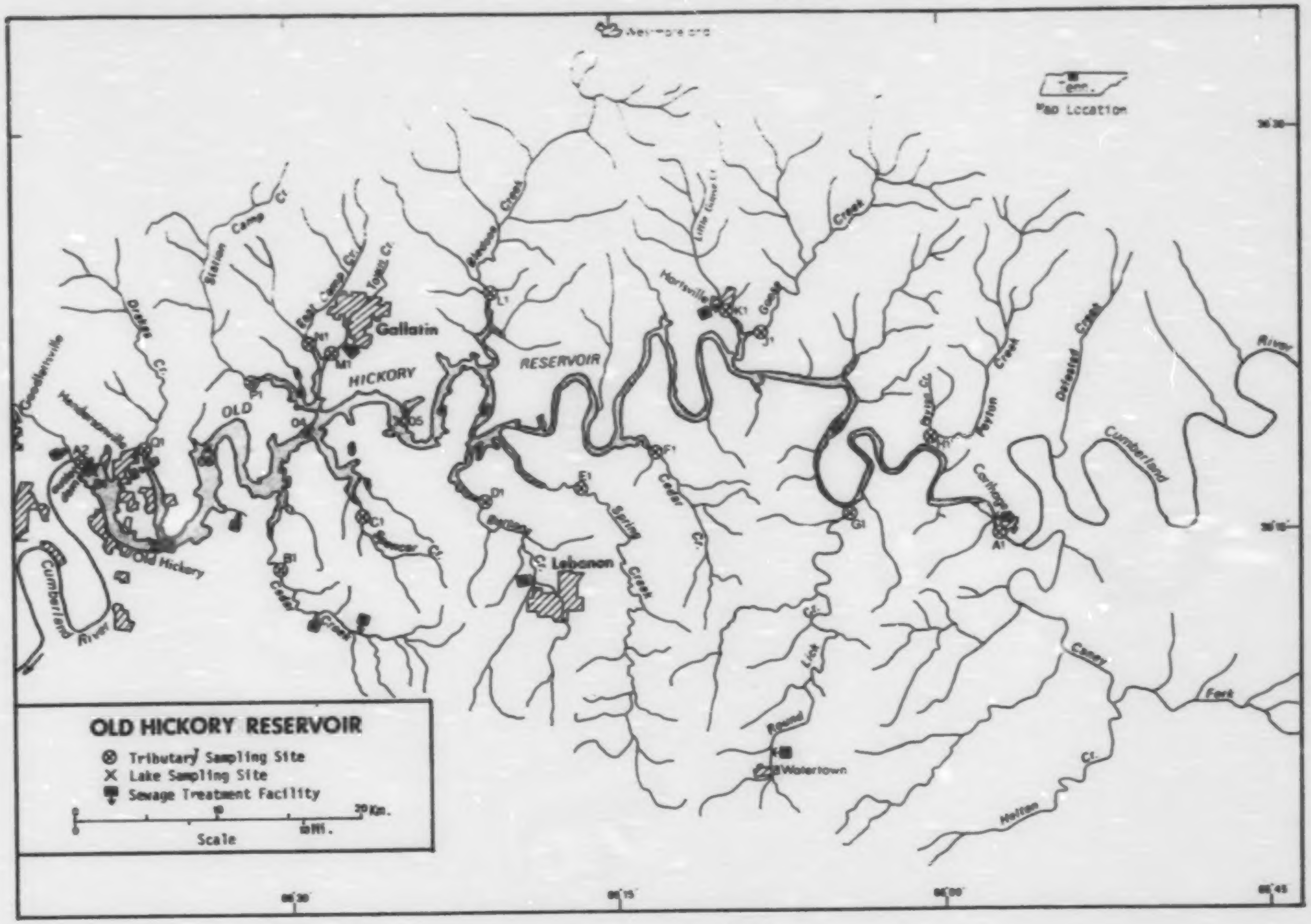
NATIONAL EUTROPHICATION SURVEY

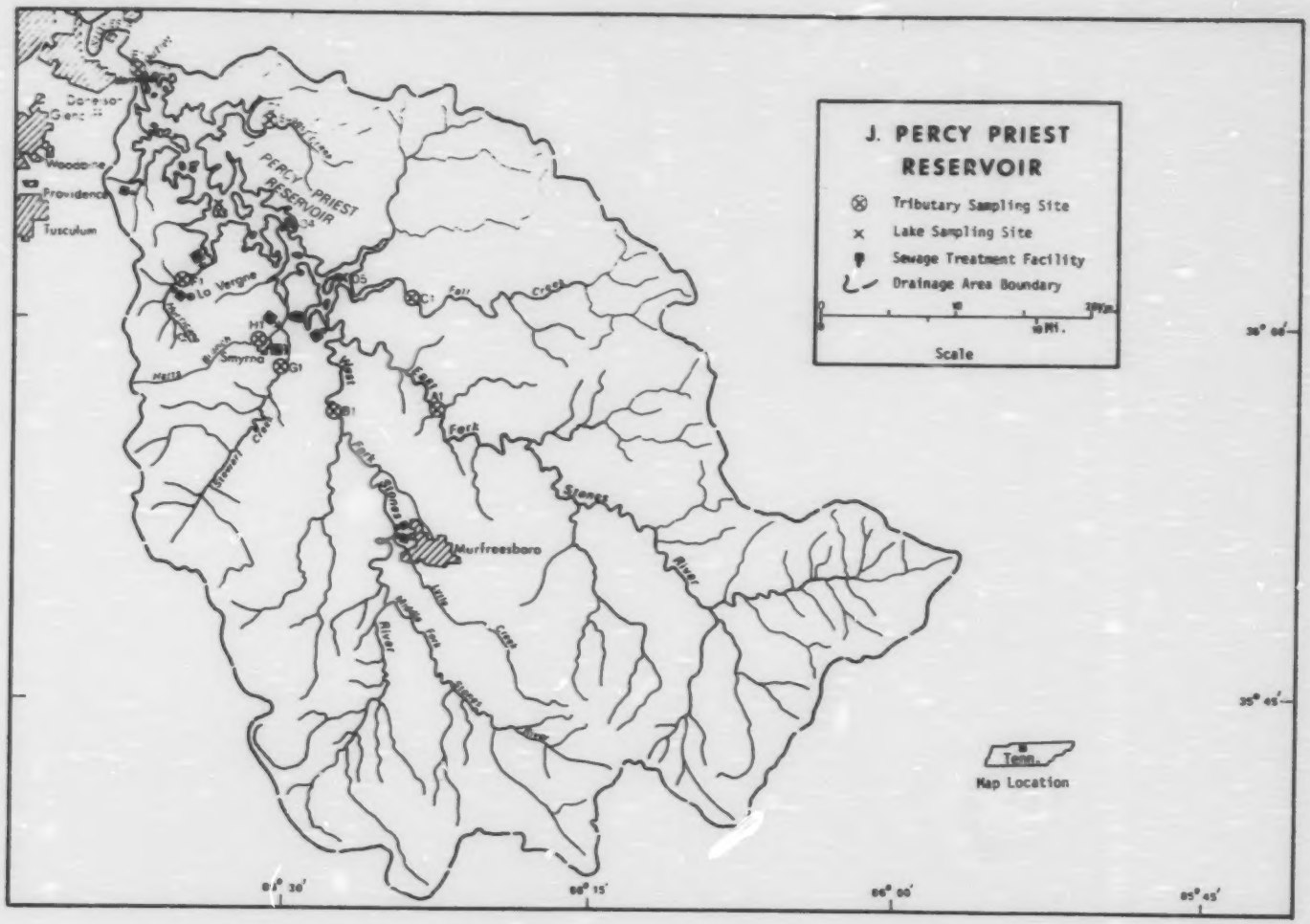
STUDY LAKES

STATE OF TENNESSEE

| LAKE NAME | COUNTY |
|---|---|
| Barkley | Stewart, Montgomery (Trigg, Lyon in KY) |
| Boone | Washington, Sullivan, Carter |
| Cheatham | Cheatham, Davidson |
| Cherokee | Jefferson, Hamblen, Grainger, Hawkins |
| Chickamauga | Hamilton, Rhea, Meigs, McMinn |
| Douglas | Sevier, Jefferson, Cocke |
| Fort Loudon | Loudon, Knox, Blount |
| Great Falls | White, Van Buren |
| Nickajack | Marion, Hamilton |
| Old Hickory | Sumner, Davidson, Wilson, Smith, Trousdale |
| Percy Priest | Davidson, Rutherford |
| Reelfoot | Obion |
| South Holston | Sullivan (Washington in VA) |
| Tims Ford | Moore, Franklin |
| Watts Bar | Rhea, Meigs, Cumberland, Roane, Loudon |
| Woods (Elk River) | Franklin, Coffee |


CHEATHAM RESERVOIR
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Scale
Tenn.
Map Location
Cumberland River
Bartons Cr.
Johnson Creek
Sulphur Fork Cr.
Little Jones Cr.
Jones Cr.
Dickson
Lake Woodhaven
White Bluff
Turnbull Cr.
Harpeth
Brush Cr.
Fairview
River
Little Harpeth River
Harpeth River
Spring Cr.
Sycamore
Creek
Ashland City
Big Marrowbone Creek
CHEATHAM
RESERVOIR
Whites Cr.
Manskar Cr.
Drakes Cr.
Old Hickory Lake
Old Hickory
Inglewood
Woodbine
Forest Hills
J. Percy Priest Reservoir
A1
A2
B1
C1
D1
D2
E1
F1
G1
H1
J1
K1
L1
M1
N1
O1
O2


OLD HICKORY RESERVOIR
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Scale
Map Location
Tenn.
Gallatin
Hartsville
Lebanon
Watertown
Carthage
Hendersonville
Old Hickory
OLD
HICKORY
RESERVOIR
Cumberland River
Caney Fork
Station Camp Cr.
East Camp Cr.
Drakes Cr.
Spring Creek
Cedar Cr.
Cedar Creek
Goose Creek
Little Goose Cr.
Peyton Creek
Defeated Creek
Round Lick Cr.
Hollan Cr.


J. PERCY PRIEST RESERVOIR
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Drainage Area Boundary
Scale
PERCY PRIEST RESERVOIR
Murfreesboro
Smyrna
La Vergne
Map Location
86° 30'
86° 15'
86° 00'
85° 45'
36° 00'
35° 45'

REPORT ON OLD HICKORY, J. PERCY PRIEST, AND CHEATHAM RESERVOIRS, TENNESSEE - STORET NOS. 4720, 4723, AND 4706.

## I. CONCLUSIONS

### A. Trophic Condition:

Old Hickory and Cheatham Reservoirs are considered eutrophic, i.e., nutrient rich and highly productive, on the basis of field observations and Survey data. Whether such nutrient enrichment is to be considered beneficial or deleterious is determined by its actual or potential impact upon designated beneficial water uses of each lake.

Primary production as measured by algal assay control yields was high in both of these two main stem impoundments. Low Secchi disc visibility caused by suspended colloidal clay particles in the water column was reported. Of the 16 Tennessee lakes sampled in 1973, only one had higher median total phosphorus and none had higher median orthophosphorus levels than Cheatham Reservoir. The "flow-through" nature of these two reservoirs minimizes the problem manifestations of high nutrient input.

J. Percy Priest, a young storage impoundment (construction was completed in 1968) is considered eutrophic. Large numbers of pollution tolerant genera were predominant among the phytoplankton identified during October sampling. In both summer and fall, dissolved oxygen concentrations were seriously depressed

with depth, and hydrogen sulfide production was detected during August. Blue-green algal blooms and algal-related turbidity in the reservoir have been noted in a study by the Tennessee Department of Public Health (1975). The relatively long retention time of J. Percy Priest Reservoir allows such manifestations of high nutrient levels, as algal blooms, low oxygen and anaerobic odor generation to become apparent during the summer months.

Mean chlorophyll a levels were 8.8 µg/l in Old Hickory Reservoir, 10.0 µg/l in J. Percy Priest, and 8.7 µg/l in Cheatham Reservoir.

B. Rate-Limiting Nutrient:

Algal assay results suggest that in the spring, primary production was limited by available phosphorus in Old Hickory Reservoir, and was co-limited by available nitrogen and phosphorus in Cheatham Reservoir. Mean lake inorganic nitrogen to orthophosphorus (N/P) ratios measured on subsequent sampling dates reveal nitrogen limitation in both reservoirs in the fall, and in Cheatham Reservoir in the summer.

No algal assay results are available for J. Percy Priest Reservoir. Mean lake N/P ratios suggest that it was nitrogen limited in the spring and fall, and phosphorus limited in the summer.

C. Nutrient Controllability:

1. Point sources -

The mean annual phosphorus loads from point sources were estimated to be 2.4% of the total load reaching Old Hickory Reservoir and 26.7% of the load reaching J. Percy Priest Reservoir. Of the latter, 14.5% was contributed by the Murfreesboro Lytle Creek Plant. Phosphorus loading to Cheatham Reservoir was estimated to be 8.9% point-source in nature, of which 8.1% was contributed by the five wastewater treatment plants in the city of Nashville.

There are two major industrial plants discharging into the reservoirs which did not participate in the 1973 Survey, and nutrient loadings from them are not included in the nutrient budgets on pages 21-24. The E. I. DuPont plant, which impacts Old Hickory Reservoir, discharges nitrogen-rich effluent; Stauffer Chemical in Nashville releases concentrated phosphate-rich effluent into Cheatham Reservoir. In addition, there are several smaller unmeasured industrial plants, such as Tennessee Co-op (fertilizer plant) into Hurricane Creek (J. Percy Priest) and Ford Glass Plant (Nashville) into Cheatham Reservoir, which may add substantial nutrient loads to their respective receiving waters. Additional study is needed on these

unmeasured industrial plants to determine what impact their discharges have on water quality in the Cumberland River.

Loading calculations yield a net export of both phosphorus and nitrogen from Old Hickory Reservoir and a net export of phosphorus from Cheatham Reservoir, suggesting that sampling for those lakes was not adequate to accurately depict loading and export rates. These apparent exports can be attributed to undetected and unmeasured discharges reaching the lakes from unknown industrial plants, to inadequate estimation procedures in determining the annual nutrient loadings from unsampled municipal plants, or to sampling error. Nutrient loading to J. Percy Reservoir was five times that proposed by Vollenweider (1975) as a "eutrophic" loading. Although elimination of the point sources impacting J. Percy Priest Reservoir would not lower the loading rate to below Vollenweider's eutrophic level, it would cause a substantial reduction in loading to the reservoir and likely result in gradual water quality improvement in the lake. Any such improvement would not be sudden, as the long hydraulic retention time of J. Percy Priest will retain the nutrients at high levels for a prolonged period.

2. Nonpoint sources -

The mean annual phosphorus loads from nonpoint sources were 97.6% of the total reaching Old Hickory Reservoir, 73.3% of the total reaching J. Percy Priest Reservoir, and 91.1% of the total load to Cheatham Reservoir. The Tennessee Department of Public Health (S. Fishel, pers. comm.) identifies the geology of the J. Percy Priest and Cheatham Reservoir drainage areas as a major source contributing phosphorus to each of the impoundments. The two main tributaries draining this phosphate-rich limestone area are the Harpeth River and the Stones River; between them they contribute 30.0% of the Cheatham Reservoir nonpoint phosphorus load.

On the basis of Survey data, it is very likely that the trophic condition of these three lakes will continue to deteriorate if the present loading rates impacting them are maintained. These data suggest that reduction of nonpoint phosphorus input must accompany total elimination of known point sources if manifestations of excessive nutrients are to be controlled or eliminated.

## II. LAKE AND DRAINAGE BASIN CHARACTERISTICS

Lake and drainage basin characteristics are itemized below. Lake morphometry was provided by the Tennessee Department of Public Health, Division of Water Quality Control; tributary flow data were provided by the Tennessee District Office of the U.S. Geological Survey (USGS). Outlet drainage areas include the lake surface areas. Mean hydraulic retention times were obtained by dividing each lake volume by the mean flow of the outlet. Tributary drainage areas plus lake surface areas do not equal the outlet drainage areas probably because of differences in the pool elevations used by the different sources in their calculations. Precipitation values were estimated by methods as outlined in National Eutrophication Survey (NES) Working Paper No. 175. A table of metric/English conversions is included as Appendix A.

A. Lake Morphometry:

| | Old Hickory Reservoir | J. Percy Priest Reservoir | Cheatham Reservoir | |
|---|---|---|---|---|
| 1. Surface area: | 91.06 | 57.47 | 30.15 | $km^2$. |
| 2. Mean depth: | 5.6 | 8.5 | 4.3 | meters. |
| 3. Maximum depth: | 17.6 | 30.5 | 13.1 | meters. |
| 4. Volume: | 509.936 | 488.495 | 129.645 | x $10^6$ $m^3$. |
| 5. Mean hydraulic retention time: | 11 | 139 | 2 | days. |

B. Tributary and Outlet (see Appendix B for flow data):

1. Tributaries -

| Old Hickory Reservoir | | | J. Percy Priest Reservoir | | | Cheatham Reservoir | | |
|---|---|---|---|---|---|---|---|---|
| Name | Drainage area($km^2$) | Mean flow ($m^3$/sec) | Name | Drainage area($km^2$) | Mean flow ($m^3$/sec) | Name | Drainage area($km^2$) | Mean flow ($m^3$/sec) |
| A(1) Cumberland River | 27,687.1 | 473.15 | A(1) East Fork Stones River | 771.8 | 13.31 | A(1) Cumberland River | 30,233.1 | 518.95 |
| B(1) Cedar Creek (western) | 92.5 | 1.71 | B(1) West Fork Stones River | 650.1 | 10.54 | B(1) Johnson Creek | 57.8 | 0.73 |
| C(1) Spencer Creek | 38.1 | 0.70 | C(1) Fall Creek | 165.8 | 3.06 | C(1) Harpeth River | 1,882.9 | 33.85 |
| D(1) Bartons Creek | 135.2 | 2.49 | D(1) Suggs Creek | 98.9 | 1.83 | D(1) Overall Creek | 20.9 | 0.25 |
| E(1) Spring Creek | 148.7 | 2.74 | F(1) Hurricane Creek | 59.8 | 0.84 | E(1) Richland Creek | 73.0 | 0.92 |
| F(1) Cedar Creek (eastern) | 86.2 | 1.59 | G(1) Stewart Creek | 147.4 | 2.44 | F(1) Browns Creek | 40.7 | 0.43 |
| G(1) Round Lick Creek | 204.9 | 3.78 | H(1) Harts Branch | 28.5 | 0.47 | G(1) Mill Creek | 277.1 | 3.90 |
| H(1) Peyton Creek | 129.8 | 2.12 | | | | H(1) Stones River | 2,419.1 | 42.10 |
| J(1) Goose Creek | 196.1 | 3.21 | | | | J(1) Mansker Creek | 119.1 | 1.68 |
| K(1) Little Goose Creek | 75.9 | 1.24 | | | | K(1) Whites Creek | 163.9 | 1.93 |
| L(1) Bledsoe Creek | 239.6 | 3.39 | | | | L(1) Big Marrowbone Creek | 91.4 | 1.11 |
| M(1) Town Creek | 23.7 | 0.33 | | | | M(1) Sycamore Creek | 269.4 | 3.26 |
| N(1) East Camp Creek | 53.4 | 0.75 | | | | N(1) Spring Creek | 47.7 | 0.58 |
| P(1) Station Camp Creek | 104.4 | 1.47 | | | | | | |
| Q(1) Drakes Creek | 89.1 | 1.26 | | | | | | |
| Minor tributaries and immediate drainage - | 844.3 | 13.76 | Minor tributaries and immediate drainage - | 336.7 | 5.76 | Minor tributaries and immediate drainage - | 960.9 | 15.40 |
| Totals | 30,149.0 | 513.69 | Totals | 2,259.0 | 38.25 | Totals | 36,657.0 | 625.09 |

2. Outlet -

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| A(2) Cumberland River | 30,233.1 | 518.95 | E(1) Stones River | 2,310.3 | 40.58 | A(2) Cumberland River | 36,682.2 | 610.11 |

C. Precipitation: (in centimeters)

| | Old Hickory Reservoir | J. Percy Priest Reservoir | Cheatham Reservoir |
|---|---|---|---|
| 1. Year of sampling - | 142.4 | 142.4 | 137.1 |
| 2. Mean annual - | 112.0 | 112.0 | 117.3 |

## III. LAKE WATER QUALITY SUMMARY

Old Hickory, J. Percy Priest, and Cheatham Reservoirs were sampled three times during the open-water season of 1973 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from five stations each on Old Hickory (with the exception of sites 02 and 04, sampled in May and August only) and J. Percy Priest Reservoirs, and two stations on Cheatham Reservoir, and from one or more depths at each station (see maps, pages v-vii). During each visit, depth-integrated samples were collected from each station for chlorophyll a analysis and phytoplankton identification and enumeration. During the first visit, 18.9-liter depth-integrated samples were composited for algal assays. Maximum depths (expressed in meters) sampled were as follows:

| Old Hickory Reservoir | | J. Percy Priest Reservoir | | Cheatham Reservoir | |
|---|---|---|---|---|---|
| Station Number | Depth | Station Number | Depth | Station Number | Depth |
| 1 | 23 | 1 | 23 | 1 | 11 |
| 2 | 21 | 2 | 19 | 2 | 9 |
| 3 | 18 | 3 | 23 | | |
| 4 | 18 | 4 | 17 | | |
| 5 | 14 | 5 | 12 | | |

For a more detailed explanation of NES methods, see NES Working Paper No. 175.

The results obtained are presented in full in Appendix C and are summarized in III-A for waters at the surface and at the maximum depth for each site. Results of the phytoplankton counts and chlorophyll a determinations are included in III-B. Results of the limiting nutrient study are presented in III-C.

CHEATHAM RESERVOIR
STORET CODE 4706

1. PHYSICAL AND CHEMICAL CHARACTERISTICS

| PARAMETER | ( 5/21/73 ) S*** = 2 N* | RANGE | MEDIAN | MAX DEPTH RANGE (METERS) | ( 8/16/73 ) S*** = 2 N* | RANGE | MEDIAN | MAX DEPTH RANGE (METERS) | ( 10/23/73 ) S*** = 1 N* | RANGE | MEDIAN | MAX DEPTH RANGE (METERS) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEMPERATURE (DEG CENT) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 17.5- 24.0 | 17.9 | 0.0- 1.2 | 4 | 24.6- 28.0 | 26.5 | 0.0- 1.5 | 2 | 29.6- 33.0 | 31.3 | 0.0- 1.5 |
| MAX DEPTH** | 2 | 17.5- 17.7 | 17.6 | 9.1- 9.4 | 2 | 24.5- 25.0 | 24.8 | 7.3- 10.7 | 1 | 29.6- 29.6 | 29.6 | 10.4- 10.4 |
| DISSOLVED OXYGEN (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 2 | 9.4- 9.8 | 9.6 | 1.2- 1.2 | 2 | 5.6- 6.6 | 6.1 | 1.5- 1.5 | 0 | ***** ***** | ***** | ***** ***** |
| MAX DEPTH** | 2 | 9.6- 9.8 | 9.7 | 9.1- 9.4 | 2 | 5.8- 6.4 | 6.1 | 7.3- 10.7 | 1 | 5.8- 5.8 | 5.8 | 10.4- 10.4 |
| CONDUCTIVITY (UMHOS) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 165.- 175. | 173. | 0.0- 1.2 | 4 | 170.- 180. | 175. | 0.0- 1.5 | 2 | 169.- 173. | 171. | 0.0- 1.5 |
| MAX DEPTH** | 2 | 160.- 175. | 168. | 9.1- 9.4 | 2 | 170.- 178. | 174. | 7.3- 10.7 | 1 | 171.- 171. | 171. | 10.4- 10.4 |
| PH (STANDARD UNITS) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 6.9- 7.8 | 7.4 | 0.0- 1.2 | 4 | 7.3- 7.7 | 7.4 | 0.0- 1.5 | 2 | 7.4- 7.4 | 7.4 | 0.0- 1.5 |
| MAX DEPTH** | 2 | 7.4- 7.9 | 7.6 | 9.1- 9.4 | 2 | 7.2- 7.3 | 7.2 | 7.3- 10.7 | 1 | 7.3- 7.3 | 7.3 | 10.4- 10.4 |
| TOTAL ALKALINITY (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 52.- 59. | 55. | 0.0- 1.2 | 4 | 57.- 63. | 61. | 0.0- 1.5 | 2 | 58.- 59. | 59. | 0.0- 1.5 |
| MAX DEPTH** | 2 | 52.- 56. | 54. | 9.1- 9.4 | 2 | 59.- 62. | 61. | 7.3- 10.7 | 1 | 61.- 61. | 61. | 10.4- 10.4 |
| TOTAL P (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 0.071-0.101 | 0.088 | 0.0- 1.2 | 4 | 0.143-0.203 | 0.179 | 0.0- 1.5 | 2 | 0.158-0.165 | 0.161 | 0.0- 1.5 |
| MAX DEPTH** | 2 | 0.100-0.111 | 0.105 | 9.1- 9.4 | 2 | 0.185-0.240 | 0.212 | 7.3- 10.7 | 1 | 0.124-0.124 | 0.124 | 10.4- 10.4 |
| DISSOLVED ORTHO P (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 0.030-0.040 | 0.033 | 0.0- 1.2 | 4 | 0.085-0.131 | 0.107 | 0.0- 1.5 | 2 | 0.086-0.093 | 0.089 | 0.0- 1.5 |
| MAX DEPTH** | 2 | 0.028-0.034 | 0.031 | 9.1- 9.4 | 2 | 0.084-0.101 | 0.092 | 7.3- 10.7 | 1 | 0.077-0.077 | 0.077 | 10.4- 10.4 |
| NO2+NO3 (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 0.380-0.400 | 0.390 | 0.0- 1.2 | 4 | 0.290-0.320 | 0.305 | 0.0- 1.5 | 2 | 0.370-0.380 | 0.375 | 0.0- 1.5 |
| MAX DEPTH** | 2 | 0.390-0.410 | 0.400 | 9.1- 9.4 | 2 | 0.280-0.320 | 0.300 | 7.3- 10.7 | 1 | 0.360-0.360 | 0.360 | 10.4- 10.4 |
| AMMONIA (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 0.060-0.070 | 0.060 | 0.0- 1.2 | 4 | 0.110-0.190 | 0.145 | 0.0- 1.5 | 2 | 0.160-0.160 | 0.160 | 0.0- 1.5 |
| MAX DEPTH** | 2 | 0.060-0.060 | 0.060 | 9.1- 9.4 | 2 | 0.110-0.170 | 0.140 | 7.3- 10.7 | 1 | 0.160-0.160 | 0.160 | 10.4- 10.4 |
| KJELDAHL N (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 4 | 0.200-0.500 | 0.400 | 0.0- 1.2 | 4 | 0.200-0.800 | 0.300 | 0.0- 1.5 | 2 | 0.300-0.900 | 0.600 | 0.0- 1.5 |
| MAX DEPTH** | 2 | 0.400-0.400 | 0.400 | 9.1- 9.4 | 2 | 0.300-0.300 | 0.300 | 7.3- 10.7 | 1 | 0.300-0.300 | 0.300 | 10.4- 10.4 |
| SECCHI DISC (METERS) | 0 | ***** ***** | ***** | | 0 | ***** ***** | ***** | | 0 | ***** ***** | ***** | |

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE
*** S = NO. OF SITES SAMPLED ON THIS DATE

HICKORY
ORET CODE 4720

## PHYSICAL AND CHEMICAL CHARACTERISTICS

| PARAMETER | ( 5/22/73 ) S*** = 5 N* | RANGE | MEDIAN | MAX DEPTH RANGE (METERS) | ( 8/16/73 ) S*** = 5 N* | RANGE | MEDIAN | MAX DEPTH RANGE (METERS) | ( 10/22/73 ) S*** = 3 N* | RANGE | MEDIAN | MAX DEPTH RANGE (METERS) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEMPERATURE (DEG CENT) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 15.3- 30.0 | 17.6 | 0.0- 1.2 | 10 | 24.8- 40.0 | 26.4 | 0.0- 1.5 | 6 | 19.7- 39.0 | 28.6 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 15.2- 16.9 | 16.4 | 9.1- 19.5 | 5 | 21.8- 22.5 | 21.9 | 14.3- 22.9 | 3 | 19.2- 20.0 | 19.7 | 12.2- 19.8 |
| DISSOLVED OXYGEN (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 5 | 10.0- 10.2 | 10.2 | 1.2- 1.2 | 5 | 8.8- 12.2 | 9.8 | 1.5- 1.5 | 3 | 7.2- 10.0 | 7.6 | 1.5- 1.5 |
| MAX DEPTH** | 5 | 9.8- 10.2 | 10.0 | 9.1- 19.5 | 5 | 6.2- 7.4 | 7.0 | 14.3- 22.9 | 3 | 7.2- 7.4 | 7.2 | 12.2- 19.8 |
| CONDUCTIVITY (UMHOS) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 155.- 160. | 160. | 0.0- 1.2 | 10 | 144.- 160. | 151. | 0.0- 1.5 | 6 | 128.- 137. | 131. | 0.0- 1.5 |
| MAX DEPTH** | 5 | 155.- 165. | 160. | 9.1- 19.5 | 5 | 136.- 144. | 136. | 14.3- 22.9 | 3 | 123.- 133. | 127. | 12.2- 19.8 |
| PH (STANDARD UNITS) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 7.7- 8.4 | 7.8 | 0.0- 1.2 | 10 | 7.0- 8.6 | 8.2 | 0.0- 1.5 | 6 | 7.4- 8.6 | 7.5 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 7.7- 7.8 | 7.7 | 9.1- 19.5 | 5 | 6.9- 7.3 | 7.2 | 14.3- 22.9 | 3 | 7.2- 7.6 | 7.3 | 12.2- 19.8 |
| TOTAL ALKALINITY (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 31.- 70. | 55. | 0.0- 1.2 | 10 | 50.- 55. | 53. | 0.0- 1.5 | 6 | 45.- 53. | 47. | 0.0- 1.5 |
| MAX DEPTH** | 5 | 45.- 64. | 58. | 9.1- 19.5 | 5 | 53.- 56. | 54. | 14.3- 22.9 | 3 | 46.- 50. | 47. | 12.2- 19.8 |
| TOTAL P (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.041-0.073 | 0.051 | 0.0- 1.2 | 10 | 0.033-0.083 | 0.056 | 0.0- 1.5 | 6 | 0.052-0.104 | 0.062 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.041-0.105 | 0.058 | 9.1- 19.5 | 5 | 0.074-0.124 | 0.102 | 14.3- 22.9 | 3 | 0.060-0.120 | 0.085 | 12.2- 19.8 |
| DISSOLVED ORTHO P (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.014-0.018 | 0.015 | 0.0- 1.2 | 10 | 0.006-0.022 | 0.015 | 0.0- 1.5 | 6 | 0.014-0.032 | 0.019 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.015-0.036 | 0.024 | 9.1- 19.5 | 5 | 0.019-0.055 | 0.028 | 14.3- 22.9 | 3 | 0.016-0.036 | 0.020 | 12.2- 19.8 |
| NO2+NO3 (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.190-0.340 | 0.315 | 0.0- 1.2 | 10 | 0.060-0.360 | 0.085 | 0.0- 1.5 | 6 | 0.210-0.240 | 0.225 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.310-0.580 | 0.330 | 9.1- 19.5 | 5 | 0.300-0.360 | 0.340 | 14.3- 22.9 | 3 | 0.220-0.250 | 0.240 | 12.2- 19.8 |
| AMMONIA (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.030-0.040 | 0.035 | 0.0- 1.2 | 10 | 0.050-0.090 | 0.070 | 0.0- 1.5 | 6 | 0.030-0.060 | 0.050 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.020-0.040 | 0.030 | 9.1- 19.5 | 5 | 0.060-0.130 | 0.100 | 14.3- 22.9 | 3 | 0.050-0.070 | 0.060 | 12.2- 19.8 |
| KJELDAHL N (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.200-0.400 | 0.200 | 0.0- 1.2 | 10 | 0.200-1.000 | 0.600 | 0.0- 1.5 | 6 | 0.200-0.600 | 0.350 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.200-0.300 | 0.200 | 9.1- 19.5 | 5 | 0.300-0.600 | 0.400 | 14.3- 22.9 | 3 | 0.200-0.200 | 0.200 | 12.2- 19.8 |
| SECCHI DISC (METERS) | 0 | *****-***** | ***** | | 0 | *****-***** | ***** | | 0 | *****-***** | ***** | |

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE
*** S = NO. OF SITES SAMPLED ON THIS DATE

J. PERCY PRIEST RESERVOI
STORET CODE 4723

## PHYSICAL AND CHEMICAL CHARACTERISTICS

| PARAMETER | ( 5/21/73 ) N* | S*** = 5 RANGE | MEDIAN | MAX DEPTH RANGE (METERS) | ( 8/16/73 ) N* | S*** = 5 RANGE | MEDIAN | MAX DEPTH RANGE (METERS) | ( 10/24/73 ) N* | S*** = 5 RANGE | MEDIAN | MAX DEPTH RANGE (METERS) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEMPERATURE (DEG CENT) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 19.9- 78.0 | 27.5 | 0.0- 1.2 | 10 | 27.0-108.0 | 32.5 | 0.0- 1.5 | 10 | 19.1- 96.0 | 28.5 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 15.1- 18.8 | 16.4 | 7.6- 20.7 | 5 | 16.2- 21.0 | 17.7 | 12.2- 22.9 | 5 | 17.5- 19.5 | 18.8 | 7.9- 20.7 |
| DISSOLVED OXYGEN (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 5 | 8.6- 11.6 | 10.2 | 1.2- 1.2 | 5 | 4.7- 10.6 | 7.6 | 1.5- 1.5 | 4 | 5.8- 8.0 | 7.0 | 1.5- 1.5 |
| MAX DEPTH** | 5 | 0.8- 6.0 | 2.2 | 7.6- 20.7 | 5 | 0.0- 1.0 | 0.2 | 12.2- 22.9 | 5 | 0.0- 8.0 | 0.1 | 7.9- 20.7 |
| CONDUCTIVITY (UMHOS) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 260.- 300. | 290. | 0.0- 1.2 | 10 | 208.- 249. | 217. | 0.0- 1.5 | 10 | 212.- 261. | 222. | 0.0- 1.5 |
| MAX DEPTH** | 5 | 280.- 340. | 300. | 7.6- 20.7 | 5 | 251.- 344. | 302. | 12.2- 22.9 | 5 | 247.- 365. | 254. | 7.9- 20.7 |
| PH (STANDARD UNITS) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 8.2- 8.6 | 8.5 | 0.0- 1.2 | 10 | 7.7- 8.3 | 8.0 | 0.0- 1.5 | 10 | 7.5- 8.0 | 7.8 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 7.4- 7.7 | 7.6 | 7.6- 20.7 | 5 | 6.7- 7.4 | 7.2 | 12.2- 22.9 | 5 | 7.1- 8.1 | 7.2 | 7.9- 20.7 |
| TOTAL ALKALINITY (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 121.- 146. | 138. | 0.0- 1.2 | 10 | 92.- 115. | 100. | 0.0- 1.5 | 10 | 103.- 135. | 115. | 0.0- 1.5 |
| MAX DEPTH** | 5 | 128.- 160. | 146. | 7.6- 20.7 | 5 | 148.- 199. | 164. | 12.2- 22.9 | 5 | 130.- 208. | 138. | 7.9- 20.7 |
| TOTAL P (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.028-0.056 | 0.042 | 0.0- 1.2 | 10 | 0.020-0.083 | 0.033 | 0.0- 1.5 | 10 | 0.018-0.090 | 0.032 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.093-0.150 | 0.099 | 7.6- 20.7 | 5 | 0.171-0.500 | 0.211 | 12.2- 22.9 | 5 | 0.069-0.666 | 0.090 | 7.9- 20.7 |
| DISSOLVED ORTHO P (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.002-0.018 | 0.006 | 0.0- 1.2 | 10 | 0.006-0.024 | 0.012 | 0.0- 1.5 | 10 | 0.007-0.037 | 0.014 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.043-0.065 | 0.048 | 7.6- 20.7 | 5 | 0.021-0.052 | 0.034 | 12.2- 22.9 | 5 | 0.021-0.037 | 0.029 | 7.9- 20.7 |
| NO2+NO3 (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.030-0.070 | 0.040 | 0.0- 1.2 | 10 | 0.050-0.110 | 0.065 | 0.0- 1.5 | 10 | 0.020-0.030 | 0.030 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.270-0.510 | 0.380 | 7.6- 20.7 | 5 | 0.080-0.270 | 0.130 | 12.2- 22.9 | 5 | 0.020-0.040 | 0.020 | 7.9- 20.7 |
| AMMONIA (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.030-0.040 | 0.040 | 0.0- 1.2 | 10 | 0.050-0.110 | 0.080 | 0.0- 1.5 | 10 | 0.040-0.060 | 0.050 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.080-0.300 | 0.170 | 7.6- 20.7 | 5 | 0.280-1.700 | 1.350 | 12.2- 22.9 | 5 | 0.040-1.260 | 1.140 | 7.9- 20.7 |
| KJELDAHL N (MG/L) | | | | | | | | | | | | |
| 0.-1.5 M DEPTH | 10 | 0.300-0.800 | 0.500 | 0.0- 1.2 | 10 | 0.400-1.200 | 0.700 | 0.0- 1.5 | 10 | 0.300-0.700 | 0.450 | 0.0- 1.5 |
| MAX DEPTH** | 5 | 0.300-0.600 | 0.400 | 7.6- 20.7 | 5 | 1.000-3.200 | 1.800 | 12.2- 22.9 | 5 | 0.500-3.300 | 1.600 | 7.9- 20.7 |
| SECCHI DISC (METERS) | | | | | | | | | | | | |
| | 0 | ***** ***** | ***** | | 0 | ***** ***** | ***** | | 0 | ***** ***** | ***** | |

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE
*** S = NO. OF SITES SAMPLED ON THIS DATE

B. Biological Characteristics:

1. Phytoplankton -

**Old Hickory Reservoir**

| Sampling Date | Dominant Genera | Algal Units per ml |
|---|---|---|
| 05/22/73 | 1. Melosira | 733 |
| | 2. Flagellates | 391 |
| | 3. Cyclotella | 134 |
| | 4. Stephanodiscus | 110 |
| | 5. Dinoflagellates | 37 |
| | Other genera | 132 |
| | Total | 1,537 |
| 08/16/73 | 1. Melosira | 5,466 |
| | 2. Flagellates | 1,520 |
| | 3. Stephanodiscus | 1,261 |
| | 4. Raphidiopsis | 582 |
| | 5. Cyclotella | 420 |
| | Other genera | 1,584 |
| | Total | 10,833 |
| 10/22/73 | 1. Melosira | 4,523 |
| | 2. Flagellates | 1,455 |
| | 3. Cryptomonas | 364 |
| | 4. Dactylococcopsis | 318 |
| | 5. Cyclotella | 250 |
| | Other genera | 1,004 |
| | Total | 7,914 |

**J. Percy Priest Reservoir**

| Sampling Date | Dominant Genera | Algal Units per ml |
|---|---|---|
| 05/21/73 | 1. Melosira | 2,653 |
| | 2. Flagellates | 1,992 |
| | 3. Stephanodiscus | 1,311 |
| | 4. Asterionella | 200 |
| | 5. Oscillatoria | 120 |
| | Other genera | 390 |
| | Total | 6,666 |
| 08/16/73 | 1. Flagellates | 771 |
| | 2. Achnanthes | 363 |
| | 3. Lyngbya | 249 |
| | 4. Stephanodiscus | 227 |
| | 5. Raphidiopsis | 204 |
| | Other genera | 615 |
| | Total | 2,429 |
| 10/24/73 | 1. Dactylococcopsis | 2,708 |
| | 2. Flagellates | 2,106 |
| | 3. Melosira | 1,228 |
| | 4. Stephanodiscus | 802 |
| | 5. Synedra | 551 |
| | Other genera | 1,602 |
| | Total | 8,997 |

**Cheatham Reservoir**

| Sampling Date | Dominant Genera | Algal Units per ml |
|---|---|---|
| 05/21/73 | 1. Melosira | 1,808 |
| | 2. Stephanodiscus | 1,173 |
| | 3. Flagellates | 869 |
| | 4. Nitzschia | 69 |
| | 5. Dactylococcopsis | 28 |
| | Other genera | 98 |
| | Total | 4,045 |
| 08/16/73 | 1. Melosira | 2,479 |
| | 2. Flagellates | 436 |
| | 3. Stephanodiscus | 367 |
| | 4. Blue-green filament | 279 |
| | 5. Nitzschia | 140 |
| | Other genera | 1,062 |
| | Total | 4,763 |
| 10/23/73 | 1. Melosira | 4,268 |
| | 2. Flagellates | 1,498 |
| | 3. Cyclotella | 174 |
| | 4. Dactylococcopsis | 174 |
| | 5. Scenedesmus | 155 |
| | Other genera | 397 |
| | Total | 6,666 |

2. Chlorophyll a -

| Old Hickory Reservoir | | | J. Percy Priest Reservoir | | | Cheatham Reservoir | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | Station Number | Chlorophyll a (µg/l) | Sampling Date | Station Number | Chlorophyll a (µg/l) | Sampling Date | Station Number | Chlorophyll a (µg/l) |
| 05/22/73 | 1 | 8.1 | 05/21/73 | 1 | 10.4 | 05/21/73 | 1 | 4.5 |
| | 2 | 9.4 | | 2 | 13.3 | | 2 | 8.6 |
| | 3 | 5.9 | | 3 | 13.5 | | | |
| | 4 | 3.3 | | 4 | 12.9 | | | |
| | 5 | 2.9 | | 5 | 22.7 | | | |
| 08/16/73 | 1 | 24.0 | 08/16/73 | 1 | 6.3 | 08/16/73 | 1 | 6.0 |
| | 2 | 11.1 | | 2 | 5.5 | | 2 | 10.2 |
| | 3 | 8.4 | | 3 | 5.7 | | | |
| | 4 | 12.7 | | 4 | 9.0 | | | |
| | 5 | 5.7 | | 5 | 10.2 | | | |
| 10/22/73 | 1 | 16.8 | 10/24/73 | 1 | 3.8 | 10/23/73 | 1 | 11.5 |
| | 2 | --- | | 2 | 3.7 | | | |
| | 3 | 5.6 | | 3 | 6.7 | | | |
| | 4 | --- | | 4 | 13.6 | | | |
| | 5 | 2.2 | | 5 | 12.6 | | | |

C. Limiting Nutrient Study:

1. Autoclaved, filtered, and nutrient spiked -

| | Old Hickory Reservoir | | | Cheatham Reservoir | | |
|---|---|---|---|---|---|---|
| Spike(mg/l) | Ortho P Conc.(mg/l) | Inorganic N Conc.(mg/l) | Maximum Yield (mg/l-dry wt.) | Ortho P Conc.(mg/l) | Inorganic N Conc.(mg/l) | Maximum Yield (mg/l-dry wt.) |
| Control | 0.016 | 0.376 | 3.8 | Missing | 0.510 | 8.8 |
| 0.05 P | 0.066 | 0.376 | 7.5 | Missing | 0.510 | 12.3 |
| 0.05 P + 1.0 N | 0.066 | 1.376 | 18.3 | Missing | 1.510 | 28.1 |
| 1.00 N | 0.016 | 1.376 | 3.6 | Missing | 1.510 | 12.5 |

2. Discussion -

The control yields of the assay alga, Selenastrum capricornutum, indicate that the potential for primary production in Old Hickory and Cheatham Reservoirs was high at the time of sampling. With the Old Hickory sample, increased growth resulted from the addition of orthophosphorus alone, but not with the addition of nitrogen alone, indicating phosphorus limitation. The Cheatham Reservoir sample showed increased growth with the exclusive addition of either orthophosphorus or nitrogen, indicating colimitation by nitrogen and phosphorus. For both samples, the simultaneous addition of orthophosphorus and nitrogen resulted in the greatest growth.

The mean lake N/P ratios of 19/1 for Old Hickory Reservoir and 14/1 for Cheatham Reservoir, measured at the time of sampling, are not inconsistent with the assay findings. In general, an N/P ratio of 14/1 or more is indicative of phosphorus limitation. Subsequent mean lake N/P ratios measured in August and October (14/1 and 12/1 for Old Hickory Reservoir; 4/1 and 6/1 for Cheatham Reservoir) suggest increased importance of nitrogen as a controlling nutrient through the summer and fall.

The assay for J. Percy Priest Reservoir was invalidated by substantial changes in sample nutrient concentrations prior to the test. Mean lake N/P ratios of 11/1, 16/1, and 13/1

observed in May, August, and October, respectively, suggest the likelihood that nitrogen and phosphorus share the limiting nutrient role in this reservoir.

## IV. NUTRIENT LOADINGS
(See Appendix D for data)

For the determination of nutrient loadings, the Tennessee National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the maps (pages i-iii), except for the high runoff months of February and March for Old Hickory Reservoir and February for J. Percy Priest and Cheatham Reservoirs when two samples were collected. Sampling was begun in April 1973, and was completed in March 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the Tennessee District Office of the USGS for the tributary sites nearest each lake.

In this report, nutrient loads for sampled tributaries, except Bartons Creek and Town Creek (Old Hickory Reservoir), were determined by using a modification of a USGS computer program for calculating stream loadings. Nutrient loads indicated for tributaries are those measured minus known point source loads, if any.

Nutrient loadings for unsampled "minor tributaries and immediate drainage" ("ZZ" of USGS) were estimated by using the mean annual nutrient loads, in $kg/km^2/yr$, for Spencer Creek, Spring Creek, Cedar Creek (eastern), Goose Creek, and Station Camp Creek at Stations C(1), E(1), F(1), J(1), and P(1), respectively, on Old Hickory Reservoir; in Fall Creek and Suggs Creek at Stations C(1) and D(1), respectively, on J. Percy

Priest Reservoir; and in Johnson Creek, Overall Creek, Big Marrowbone Creek, and Spring Creek at Stations B(1), D(1), L(1), and N(1), respectively, on Cheatham Reservoir; and by multiplying the means by "ZZ" area in $km^2$. Nutrient loads for Bartons Creek and Town Creek (Stations 4720D1 and 4720M1) were estimated by multiplying the drainage areas at those sites (in $km^2$) times the mean annual nutrient loads for tributaries C(1), E(1), F(1), J(1), and P(1) entering Old Hickory Reservoir.

The operators of the Hendersonville, Hartsville, La Vergne, Murfreesboro (Lytle Creek and Sinking Creek), Smyrna (#1 and #2), Nashville (Smith Spring, Hurricane Creek, Central, Dry Creek, Hermitage Hills, and Scotts Hollow), Ashland City, Old Hickory, and Parkwood Company wastewater treatment plants provided monthly effluent samples and corresponding flow data. Nutrient loads for the Gallatin, Watertown, Lebanon, Carthage, Smyrna, Woodbury, Twin Valley Estates, Dickson, White Bluff, Clover Bottom Development Center, and Donelson Plaza Shopping Center wastewater plants were estimated at 1.134 kg P and 3.401 kg N/capita/yr.

Nutrient loadings for the Nashville-Whites Creek plant are not included in this report since the plant did not become operational until January 1975.

Loadings for the Cedars of Lebanon State Park were calculated at a population of 14,370 during the 3 summer months. All schools were estimated at 0.567 kg P and 1.701 kg N/capita/yr. (Covers 180 days).

A. Waste Sources:

1. Known municipal -

| Name | Population Served* | Treatment* | Mean flow ($m^3/d \times 10^3$) | Receiving Water |
|---|---|---|---|---|
| **Old Hickory Reservoir** | | | | |
| Hendersonville | 2,100 | 1. | 2.413 | Drakes Creek |
| Hartsville | 2,200 | 2. | 0.464 | Little Goose Creek |
| Gallatin | 10,000 | 1. | 3.785† | Town Creek |
| Watertown | 1,300 | 3. | 0.492† | Round Lick Creek |
| Lebanon | 7,600 | 2. | 2.877† | Barton's Creek |
| Carthage | 2,000 | 4. | 0.757† | Cumberland River |
| Lakeview Elementary School | 941 | 3. | 0.356† | Smith Creek |
| Mt. Juliet High School | 980 | 3. | 0.371† | Cedar Creek (western) |
| Southside Elementary School | 511 | 3. | 0.193† | Sinking Creek |
| W. Wilson Elementary School | 309 | 3. | 0.117† | Cedar Creek (western) |
| **J. Percy Priest Reservoir** | | | | |
| Murfreesboro (Lytle Creek)†† | 27,900 | 2. | 10.694 | West Fork Stones River |
| Murfreesboro (Sinking Creek) | 9,120 | 5. | 5.101 | West Fork Stones River |
| La Vergne | 408 | 1. | 0.088 | Hurricane Creek |
| Smyrna (#1 and #2) | 6,934 | 2. | 1.715 | Harts Branch/Stewart Creek |
| Smyrna (Old Air Force Base) | 10,000 | 2. | 3.785† | Stewart Creek |
| Woodbury | 1,750 | 2. | 0.662† | East Fork Stones River |

Key: 1. Activated sludge
2. Trickling filter
3. Extended aeration
4. Primary
5. Microstrainer

*Plant operators: U.S. EPA (1971) and/or Tennessee Department of Public Health (1975).
†Estimated at 0.3785 $m^3$/capita/day.
††50% of material treated at this plant consists of metal plating and dairy wastes.

A. Waste Sources (continued):

1. Known municipal -

| Name | Population Served* | Treatment* | Mean flow ($m^3/d \times 10^3$) | Receiving Water |
|---|---|---|---|---|
| **Cheatham Reservoir** | | | | |
| Ashland City | 3,170 | 1. | 1.781 | Cheatham Reservoir |
| Nashville (Main Plant) | 190,000 | 1. | 177.195 | Cheatham Reservoir |
| Nashville (Dry Creek Plant) | 40,440 | 1. | 10.467 | Cheatham Reservoir |
| Old Hickory | 10,591 | 1. | 2.719 | Cheatham Reservoir |
| Parkwood Service Co. | 6,923 | 2. | 1.845 | Ewing Creek/Whites Creek |
| Nashville (Hermitage Hills) | 6,000 | 2. | 2.130 | Stones River |
| Nashville (Scotts Hollow) | 2,150 | 2. | 0.530 | Stones River |
| Nashville (Whites Creek) | 48,300 | 5. | 18.282 | Cheatham Reservoir |
| Nashville (Smith Spring Plant) | 9,683 | 1. | 2.178 | East Fork Hamilton Creek |
| Dickson | 2,900 | 3. | 1.098† | Jones Creek/Harpeth River |
| White Bluff | 800 | 3. | 0.303† | Buck Springs Branch/Trace Creek/ Harpeth River |
| Central High School | 1,239 | 3. | 0.469† | Sycamore Creek |
| East Cheatham Elementary School | 707 | 3. | 0.268† | Blue Spring Creek |
| Clover Bottom Development Center | 3,200 | 2. | 1.211† | Stones River |
| Donelson Plaza Shopping Center | 1,200 | 3. | 0.454† | Stones River |
| Joelton Elementary School | 1,320 | 3. | 0.500† | Earthman Fork Creek/Whites Creek |
| Fairview Elementary School | 584 | 3. | 0.221† | Caney Fork Creek/Harpeth River |
| Fairview High School | 567 | 3. | 0.215† | Caney Fork Creek/Harpeth River |
| Mt. Juliet Elementary and Junior High School | 1,323 | 3. | 0.501† | Stoners Creek/Stones River |
| Twin Valley Estates | 700 | 3. | 0.265† | Mansker Creek/Cumberland River |

2. Known industrial

| Name | Product* | Treatment* | Mean flow ($m^3/d \times 10^3$) | Receiving Water |
|---|---|---|---|---|
| **Old Hickory Reservoir** | | | | |
| E. I. Dupont | Textile fiber | 1. | 94.625 | Cumberland River |
| **J. Percy Priest Reservoir** | | | | |
| Nashville (Hurricane Creek) | Tire manufacturing and others | 1. | 2.588 | Hurricane Creek embayment of J. Percy Priest Reservoir |

**Cheatham Reservoir** - none

Key: 1. Activated sludge
2. Trickling filter
3. Extended aeration
4. Primary
5. Microstrainer

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

| Old Hickory Reservoir | | | J. Percy Priest Reservoir | | |
|---|---|---|---|---|---|
| Source | kg P/yr | % of total | Source | kg P/yr | % of total |
| a. Tributaries (nonpoint load) - | | | Tributaries (nonpoint load) - | | |
| A(1) Cumberland River | 1,052,750 | 77.5 | A(1) East Fork Stones River | 64,460 | 23.6 |
| B(1) Cedar Creek (western) | 7,090 | 0.5 | B(1) West Fork Stones River | 103,005 | 37.8 |
| C(1) Spencer Creek | 3,205 | 0.2 | C(1) Fall Creek | 4,410 | 1.6 |
| D(1) Bartons Creek | 14,195 | 1.0 | D(1) Suggs Creek | 1,835 | 0.7 |
| E(1) Spring Creek | 22,090 | 1.6 | F(1) Hurricane Creek | 3,375 | 1.2 |
| F(1) Cedar Creek (eastern) | 8,240 | 0.6 | G(1) Stewart Creek | 10,835 | 4.0 |
| G(1) Round Lick Creek | 19,510 | 1.4 | H(1) Harts Branch | 2,570 | 0.9 |
| H(1) Peyton Creek | 22,675 | 1.7 | | | |
| J(1) Goose Creek | 21,265 | 1.6 | | | |
| K(1) Little Goose Creek | 9,250 | 0.7 | | | |
| L(1) Bledsoe Creek | 24,645 | 1.8 | | | |
| M(1) Town Creek | 2,490 | 0.2 | | | |
| N(1) East Camp Creek | 7,505 | 0.6 | | | |
| P(1) Station Camp Creek | 9,370 | 0.7 | | | |
| Q(1) Drakes Creek | 10,000 | 0.7 | | | |
| b. Minor tributaries and immediate drainage (nonpoint load) - | 88,650 | 6.5 | Minor tributaries and immediate drainage (nonpoint load) - | 7,745 | 2.8 |
| c. Known municipal STP's - | | | Known municipal STP's - | | |
| Hendersonville | 7,005 | 0.5 | Murfreesboro (Lytle Creek) | 39,450 | 14.5 |
| Hartsville | 2,235 | 0.2 | Murfreesboro (Sinking Creek) | 11,855 | 4.3 |
| Gallatin | 11,340 | 0.8 | La Vergne | 140 | 0.1 |
| Watertown | 1,475 | 0.1 | Smyrna (#1 and #2) | 7,950 | 2.9 |
| Lebanon | 8,620 | 0.6 | Smyrna (Old Air Force Base Plant) | 11,340 | 4.2 |
| Carthage | 2,270 | 0.2 | Woodbury | 1,985 | 0.7 |
| Lakeview Elementary School | 535 | <0.1 | | | |
| Mt. Juliet High School | 555 | <0.1 | | | |
| Southside Elementary School | 290 | <0.1 | | | |
| W. Wilson Elementary School | 175 | <0.1 | | | |
| d. Septic tanks* - | 80 | <0.1 | Septic tanks* - | 30 | <0.1 |
| e. Known industrial - | | | Known industrial | | |
| E. I. Dupont (see page 2) | | | Nashville (Hurricane Creek Plant) | 825 | 0.3 |
| f. Direct precipitation** - | 1,595 | 0.1 | Direct precipitation** - | 1,005 | 0.4 |
| Totals | 1,359,105 | 100.0 | Totals | 272,815 | 100.0 |
| 2. Output - A(2) Cumberland River | 1,497,710 | | E(1) Stones River | 244,995 | |
| 3. Net annual P export *** - | 138,605 | | Net annual P accumulation - | 27,820 | |

*Estimate based on: 248 lakeside residences, 4 parks, 2 camps for Old Hickory; 100 lakeside residences, 1 camp and 1 park for J. Percy Priest Reservoir.
**Estimated (see Working Paper No. 175).
***Exports probably due to unknown nutrient sources and/or nonrepresentative sampling.

B. Annual Total Phosphorus Loading - Average Year (continued):

1. Inputs -

Cheatham Reservoir

| Source | kg P/yr | % of total |
|---|---|---|
| a. Tributaries (nonpoint load) - | | |
| A(1) Cumberland River | 1,745,805 | 54.9 |
| B(1) Johnson Creek | 445 | <0.1 |
| C(1) Harpeth River | 503,660 | 15.8 |
| D(1) Overall Creek | 2,940 | 0.1 |
| E(1) Richland Creek | 11,120 | 0.3 |
| F(1) Browns Creek | 8,860 | 0.3 |
| G(1) Mill Creek | 85,020 | 2.7 |
| H(1) Stones River | 445,135 | 14.0 |
| J(1) Mansker Creek | 11,060 | 0.3 |
| K(1) Whites Creek | 35,545 | 1.1 |
| L(1) Big Marrowbone Creek | 725 | <0.1 |
| M(1) Sycamore Creek | 1,945 | 0.1 |
| N(1) Spring Creek | 390 | <0.1 |
| b. Minor tributaries and immediate drainage (nonpoint load) - | 39,395 | 1.2 |
| c. Known municipal STP's - | | |
| Ashland City | 6,290 | 0.2 |
| Nashville (Main Plant) | 200,245 | 6.3 |
| Nashville (Dry Creek Plant) | 34,445 | 1.1 |
| Old Hickory | 6,650 | 0.2 |
| Parkwood Service Co. | 6,355 | 0.2 |
| Nashville (Hermitage Hills) | 8,655 | 0.3 |
| Nashville (Scotts Hollow) | 1,840 | 0.1 |
| Nashville (Smith Spring Plant) | 8,975 | 0.3 |
| Dickson | 3,290 | 0.1 |
| White Bluff | 905 | <0.1 |
| Central High School | 705 | <0.1 |
| East Cheatham Elementary School | 400 | <0.1 |
| Clover Bottom Development Center | 3,630 | 0.1 |
| Donelson Plaza Shopping Center | 1,360 | <0.1 |
| Joelton Elementary and High School | 750 | <0.1 |
| Fairview Elementary School | 330 | <0.1 |
| Fairview High School | 320 | <0.1 |
| Mt. Juliet Elementary and Junior High School | 750 | <0.1 |
| Twin Valley Estates | 795 | <0.1 |
| d. Septic tanks* - | 60 | <0.1 |
| e. Know industrial - none | | |
| f. Direct precipitation** - | 530 | <0.1 |
| Totals | 3,179,325 | 100.0 |
| 2. Output - A(2) Cumberland River | 4,466,890 | |
| 3. Net annual P export*** - | 1,287,565 | |

*Estimate based on: 214 lakeside residences for Cheatham Reservoir.
**Estimated (see Working Paper No. 175).
***Exports probably due to unknown nutrient sources and/or nonrepresentative sampling.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

| Old Hickory Reservoir | | | J. Percy Priest Reservoir | | |
|---|---|---|---|---|---|
| Source | kg N/yr | % of total | Source | kg N/yr | % of total |
| a. Tributaries (nonpoint load) - | | | Tributaries (nonpoint load) - | | |
| A(1) Cumberland River | 15,141,740 | 89.2 | A(1) East Fork Stones River | 546,760 | 34.9 |
| B(1) Cedar Creek (western) | 44,490 | 0.3 | B(1) West Fork Stones River | 517,735 | 33.0 |
| C(1) Spencer Creek | 21,945 | 0.1 | C(1) Fall Creek | 63,850 | 4.1 |
| D(1) Bartons Creek | 86,395 | 0.5 | D(1) Suggs Creek | 31,655 | 2.0 |
| E(1) Spring Creek | 90,515 | 0.5 | F(1) Hurricane Creek | 19,885 | 1.3 |
| F(1) Cedar Creek (eastern) | 64,185 | 0.4 | G(1) Stewart Creek | 71,485 | 4.6 |
| G(1) Round Lick Creek | 183,760 | 1.1 | H(1) Harts Branch | 11,225 | 0.7 |
| H(1) Peyton Creek | 104,785 | 0.6 | | | |
| J(1) Goose Creek | 140,660 | 0.8 | | | |
| K(1) Little Goose Creek | 49,715 | 0.3 | | | |
| L(1) Bledsoe Creek | 137,830 | 0.8 | | | |
| M(1) Town Creek | 15,145 | 0.1 | | | |
| N(1) East Camp Creek | 49,710 | 0.3 | | | |
| P(1) Station Camp Creek | 57,385 | 0.3 | | | |
| Q(1) Drakes Creek | 61,235 | 0.4 | | | |
| b. Minor tributaries and immediate drainage (nonpoint load) - | 539,510 | 3.2 | Minor tributaries and immediate drainage (nonpoint load) - | 118,520 | 7.6 |
| c. Known municipal STP's - | | | Known municipal STP's - | | |
| Hendersonville | 7,600 | <0.1 | Murfreesboro (Lytle Creek) | 45,070 | 2.9 |
| Hartsville | 3,480 | <0.1 | Murfreesboro (Sinking Creek) | 25,775 | 1.6 |
| Gallatin | 34,010 | 0.2 | La Vergne | 260 | <0.1 |
| Watertown | 4,420 | <0.1 | Smyrna (#1 and #2) | 10,270 | 0.7 |
| Lebanon | 25,850 | 0.2 | Smyrna (Old Air Force Base Plant) | 34,010 | 2.2 |
| Carthage | 6,800 | <0.1 | Woodbury | 5,950 | 0.4 |
| Lakeview Elementary School | 1,600 | <0.1 | | | |
| Mt. Juliet High School | 1,665 | <0.1 | | | |
| Southside Elementary School | 870 | <0.1 | | | |
| W. Wilson Elementary School | 525 | <0.1 | | | |
| d. Septic tanks* - | 2,925 | <0.1 | Septic tanks* - | 1,170 | 0.1 |
| e. Known industrial - | | | Known industrial - | | |
| E. I. Dupont (see page 2) | | | Nashville (Hurricane Creek Plant) | 1,920 | 0.1 |
| f. Direct precipitation** - | 98,310 | 0.6 | Direct precipitation** - | 62,045 | 4.0 |
| Totals | 16,977,060 | 100.0 | Totals | 1,567,585 | 100.0 |
| 2. Output - A(2) Cumberland River | 18,096,625 | | Output - E(1) Stones River | 1,485,790 | |
| 3. Net annual N export*** - | 1,119,565 | | Net annual accumulation - | 81,795 | |

*Estimate based on: 248 lakeside residences, 4 parks, 2 camps for Old Hickory Reservoir; 100 lakeside residences, 1 camp and 1 state park for J. Percy Priest Reservoir.
**Estimated (see Working Paper No. 175).
***Exports probably due to unknown nutrient sources and/or nonrepresentative sampling.

C. Annual Total Nitrogen Loading - Average Year (continued):

1. Inputs -

Cheatham Reservoir

| Source | kg N/yr | % of total |
|---|---|---|
| a. Tributaries (nonpoint load) - | | |
| A(1) Cumberland River | 16,778,530 | 77.0 |
| B(1) Johnson Creek | 18,620 | 0.1 |
| C(1) Harpeth River | 1,275,675 | 5.9 |
| D(1) Overall Creek | 8,085 | <0.1 |
| E(1) Richland Creek | 36,355 | 0.2 |
| F(1) Browns Creek | 40,860 | 0.2 |
| G(1) Mill Creek | 217,910 | 1.0 |
| H(1) Stones River | 1,912,800 | 8.8 |
| J(1) Mansker Creek | 58,285 | 0.3 |
| K(1) Whites Creek | 75,230 | 0.3 |
| L(1) Big Marrowbone Creek | 23,300 | 0.1 |
| M(1) Sycamore Creek | 90,870 | 0.4 |
| N(1) Spring Creek | 24,910 | 0.1 |
| b. Minor tributaries and immediate drainage (nonpoint load) - | 356,495 | 1.6 |
| c. Known municipal STP's - | | |
| Ashland City | 9,985 | 0.1 |
| Nashville (Main Plant) | 685,585 | 3.2 |
| Nashville (Dry Creek Plant) | 46,240 | 0.2 |
| Old Hickory | 14,100 | 0.1 |
| Parkwood Service Co. | 5,470 | <0.1 |
| Nashville (Hermitage Hills) | 15,025 | 0.1 |
| Nashville (Scotts Hollow) | 3,095 | <0.1 |
| Nashville (Smith Spring Plant) | 13,115 | 0.1 |
| Dickson | 9,865 | <0.1 |
| White Bluff | 2,720 | <0.1 |
| Central High School | 2,105 | <0.1 |
| East Cheatham Elementary School | 1,200 | <0.1 |
| Clover Bottom Development Center | 10,885 | 0.1 |
| Donelson Plaza Shopping Center | 4,080 | <0.1 |
| Joelton Elementary and High School | 2,245 | <0.1 |
| Fairview Elementary School | 995 | <0.1 |
| Fairview High School | 965 | <0.1 |
| Mt. Juliet Elementary and Junior High School | 2,250 | <0.1 |
| Twin Valley Estates | 2,380 | <0.1 |
| d. Septic tanks* - | 2,280 | <0.1 |
| e. Known industrial - none | | |
| f. Direct precipitation** - | 32,550 | 0.2 |
| Totals | 21,785,060 | 100.0 |
| 2. Output - A(2) Cumberland River | 17,655,215 | |
| 3. Net annual N accumulation - | 4,129,845 | |

*Estimate based on: 214 lakeside residences for Cheatham Reservoir.
**Estimated (see Working Paper No. 175).

D. Mean Annual Nonpoint Nutrient Export by Subdrainage Area:

| Tributary | kg P/km$^2$/yr | kg N/km$^2$/yr |
|---|---|---|
| **Old Hickory Reservoir** | | |
| A(1) Cumberland River | 38 | 547 |
| B(1) Cedar Creek (western) | 77 | 481 |
| C(1) Spencer Creek | 84 | 576 |
| D(1) Bartons Creek | 105 | 639 |
| E(1) Spring Creek | 149 | 609 |
| F(1) Cedar Creek (eastern) | 96 | 745 |
| G(1) Round Lick Creek | 95 | 897 |
| H(1) Peyton Creek | 175 | 807 |
| J(1) Goose Creek | 108 | 717 |
| K(1) Little Goose Creek | 122 | 655 |
| L(1) Bledsoe Creek | 103 | 575 |
| M(1) Town Creek | 105 | 639 |
| N(1) Eastern Camp Creek | 141 | 931 |
| P(1) Station Camp Creek | 90 | 550 |
| Q(1) Drakes Creek | 112 | 687 |
| **J. Percy Priest Reservoir** | | |
| A(1) East Fork Stones River | 84 | 708 |
| B(1) West Fork Stones River | 158* | 796* |
| C(1) Fall Creek | 27 | 385 |
| D(1) Suggs Creek | 19 | 320 |
| F(1) Hurricane Creek | 56 | 332 |
| G(1) Stewart Creek | 74 | 485 |
| H(1) Harts Branch | 90 | 394 |
| **Cheatham Reservoir** | | |
| A(1) Cumberland River | 58 | 555 |
| B(1) Johnson Creek | 8 | 322 |
| C(1) Harpeth River | 267* | 678* |
| D(1) Overall Creek | 141 | 387 |
| E(1) Richland Creek | 152 | 498 |
| F(1) Browns Creek | 218 | 1,004 |
| G(1) Mill Creek | 307 | 786 |
| H(1) Stones River | 184 | 791 |
| J(1) Mansker Creek | 93 | 489 |
| K(1) Whites Creek | 217 | 459 |
| L(1) Big Marrowbone Creek | 8 | 255 |
| M(1) Sycamore Creek | 7 | 337 |
| N(1) Spring Creek | 8 | 522 |

*Background loadings to these tributaries are high probably because their drainage areas are geologically rich in phosphate.

E. Yearly Loadings:

In the following table, the existing phosphorus loadings are compared to those proposed by Vollenweider (1975). Essentially, his "eutrophic" loading is that at which the receiving waters would become eutrophic or remain eutrophic; his "oligotrophic" loading is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic loading would be considered one between "eutrophic" and "oligotrophic".

Note that Vollenweider's model may not apply to lakes with short hydraulic retention times or in which light penetration is severely restricted by high concentrations of suspended solids in the surface waters.

| | Total Yearly Phosphorus Loadings ($g/m^2/yr$) | | |
|---|---|---|---|
| | Old Hickory Reservoir | J. Percy Priest Reservoir | Cheatham Reservoir |
| Estimated loadings | 14.93 | 4.75 | 105.45 |
| Vollenweider's "eutrophic" loadings | 2.53 | 0.90 | 4.77 |
| Vollenweider's "oligotrophic" loadings | 1.27 | 0.45 | 2.38 |

## V. LITERATURE REVIEWED

Fishel, Stephen H. 1976. Personal Communication. Tennessee Department of Public Health, Division of Water Quality Control, Nashville, Tennessee.

Tennessee Department of Public Health (1975-a). "Eutrophication of Surface Waters, J. Percy Priest Reservoir". Technical Report No. 102. Division of Water Quality Control, Nashville, Tennessee.

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U.S. Environmental Protection Agency. 1971. "Inventory of Wastewater Treatment Facilities". Office of Media Programs, Office of Water Programs, Washington, D.C.

_____. 1975. National Eutrophication Survey Methods 1973-1976. Working Paper No. 175. Environmental Monitoring and Support Laboratory, Las Vegas, Nevada and Corvallis Environmental Research Laboratory, Corvallis, Oregon.

Vollenweider, R. A. 1975. Input-Output Models With Special Reference to the Phosphorus Loading Concept in Limnology. Schweiz. Z. Hydrol. 37:53-84.

# VI. APPENDICES

## APPENDIX A

## CONVERSION FACTORS

## CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x $8.107 \times 10^{-4}$ = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

# APPENDIX B

# TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 09/13/76

LAKE CODE 4706 CHEATHAM RESERVOIR

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 36682.2

| TRIBUTARY | SUB-DRAINAGE AREA(SQ KM) | NORMALIZED FLOWS(CMS) JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4706A1 | 30233.1 | 665.45 | 792.87 | 965.60 | 928.79 | 603.15 | 353.96 | 325.64 | 305.52 | 239.56 | 218.61 | 311.49 | 535.19 | 518.95 |
| 4706A2 | 36482.2 | 804.20 | 1030.73 | 1200.63 | 1093.03 | 688.10 | 385.11 | 339.80 | 322.81 | 254.00 | 235.60 | 359.52 | 637.13 | 610.11 |
| 4706B1 | 57.8 | 1.12 | 1.55 | 1.70 | 1.25 | 0.91 | 0.34 | 0.29 | 0.26 | 0.18 | 0.16 | 0.35 | 0.71 | 0.73 |
| 4706C1 | 1882.9 | 69.38 | 79.57 | 79.00 | 52.67 | 39.87 | 15.04 | 8.86 | 7.82 | 6.17 | 5.78 | 16.66 | 37.94 | 33.85 |
| 4706D1 | 24.9 | 0.311 | 0.575 | 0.498 | 0.518 | 0.297 | 0.064 | 0.055 | 0.046 | 0.021 | 0.027 | 0.125 | 0.433 | 0.246 |
| 4706E1 | 73.0 | 1.17 | 1.61 | 1.40 | 1.49 | 1.01 | 0.59 | 0.42 | 0.26 | 0.14 | 0.15 | 0.55 | 2.26 | 0.92 |
| 4706F1 | 40.7 | 0.54 | 0.87 | 0.73 | 0.83 | 0.73 | 0.28 | 0.29 | 0.29 | 0.15 | 0.12 | 0.27 | 0.10 | 0.43 |
| 4706G1 | 277.1 | 5.89 | 8.24 | 8.61 | 7.93 | 4.53 | 1.85 | 0.73 | 0.70 | 0.30 | 0.82 | 1.67 | 5.80 | 3.90 |
| 4706H1 | 2419.1 | 85.23 | 94.86 | 64.56 | 51.25 | 42.19 | 32.85 | 6.00 | 11.61 | 7.36 | 24.55 | 32.56 | 55.78 | 42.10 |
| 4706J1 | 119.1 | 2.97 | 4.53 | 3.91 | 2.97 | 1.45 | 0.52 | 0.27 | 0.14 | 0.13 | 0.16 | 1.61 | 1.73 | 1.68 |
| 4706K1 | 163.9 | 2.44 | 4.53 | 3.91 | 4.08 | 2.33 | 0.50 | 0.43 | 0.36 | 0.16 | 0.22 | 0.99 | 3.40 | 1.93 |
| 4706L1 | 91.4 | 1.41 | 2.46 | 2.70 | 2.18 | 1.62 | 0.45 | 0.45 | 0.43 | 0.21 | 0.23 | 0.47 | 0.78 | 1.11 |
| 4706M1 | 269.4 | 4.16 | 7.25 | 7.96 | 6.43 | 4.76 | 1.33 | 1.33 | 1.27 | 0.62 | 0.68 | 1.38 | 2.30 | 3.26 |
| 4706N1 | 47.7 | 0.73 | 1.28 | 1.41 | 1.14 | 0.84 | 0.23 | 0.23 | 0.22 | 0.11 | 0.12 | 0.24 | 0.41 | 0.58 |
| 4706ZZ | 960.9 | 27.95 | 34.55 | 35.11 | 27.21 | 15.77 | 7.05 | 3.57 | 3.14 | 2.10 | 2.94 | 6.94 | 19.74 | 15.40 |

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 36682.2
SUM OF SUB-DRAINAGE AREAS = 36656.9

TOTAL FLOW IN = 7528.59
TOTAL FLOW OUT = 7350.75

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4706A1 | 4 | 73 | 1008.080 | 14 | 1087.367 | 15 | 1070.377 | | |
| | 5 | 73 | 942.951 | | | | | | |
| | 6 | 73 | 982.594 | 11 | 1180.812 | | | | |
| | 7 | 73 | 724.911 | 26 | 818.357 | | | | |
| | 8 | 73 | 461.564 | 15 | 291.463 | | | | |
| | 9 | 73 | 206.147 | 8 | 129.408 | | | | |
| | 10 | 73 | 241.260 | 14 | 317.149 | | | | |
| | 11 | 73 | 484.218 | 3 | 197.652 | | | | |
| | 12 | 73 | 951.446 | 2 | 1732.991 | | | | |
| | 1 | 74 | 2180.397 | 6 | 1752.813 | | | | |
| | 2 | 74 | 1588.575 | 3 | 2370.120 | 19 | 1424.337 | | |
| | 3 | 74 | 996.753 | 3 | 722.080 | 20 | 1059.050 | | |
| 4706A2 | 4 | 73 | 1441.327 | 14 | 1180.812 | | | | |
| | 5 | 73 | 1237.446 | 4 | 1296.912 | | | | |
| | 6 | 73 | 1166.654 | 11 | 1469.644 | | | | |
| | 7 | 73 | 756.060 | 26 | 818.357 | | | | |
| | 8 | 73 | 470.060 | 15 | 216.058 | | | | |
| | 9 | 73 | 223.986 | 8 | 159.141 | | | | |
| | 10 | 73 | 275.240 | 14 | 356.792 | | | | |
| | 11 | 73 | 654.119 | 3 | 294.495 | | | | |
| | 12 | 73 | 1277.090 | 2 | 2590.991 | | | | |
| | 1 | 74 | 2860.001 | 6 | 2828.853 | | | | |
| | 2 | 74 | 2002.001 | 3 | 2704.259 | 19 | 1713.169 | | |
| | 3 | 74 | 1196.971 | 3 | 722.080 | 20 | 1160.991 | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 09/13/76

LAKE CODE 4706 CHEATHAM RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4706M1 | 4 | 73 | 2.280 | 14 | 0.770 | | | | |
| | 5 | 73 | 2.044 | 4 | 2.229 | | | | |
| | 6 | 73 | 0.430 | 11 | 0.396 | | | | |
| | 7 | 73 | 0.278 | 26 | 0.221 | | | | |
| | 8 | 73 | 0.170 | 15 | 0.201 | | | | |
| | 9 | 73 | 0.176 | 8 | 0.164 | | | | |
| | 10 | 73 | 0.190 | 14 | 0.108 | | | | |
| | 11 | 73 | 1.376 | 3 | 0.108 | | | | |
| | 12 | 73 | 1.093 | 2 | 1.957 | | | | |
| | 1 | 74 | 4.049 | 6 | 2.299 | | | | |
| | 2 | 74 | 1.104 | 3 | 1.396 | 19 | 0.898 | | |
| | 3 | 74 | 1.320 | 3 | 0.807 | 20 | 0.898 | | |
| 4706C1 | 4 | 73 | 123.461 | 14 | 47.855 | | | | |
| | 5 | 73 | 86.650 | 4 | 253.153 | | | | |
| | 6 | 73 | 43.325 | 11 | 39.927 | | | | |
| | 7 | 73 | 15.857 | 26 | 11.950 | | | | |
| | 8 | 73 | 9.684 | 15 | 16.480 | | | | |
| | 9 | 73 | 6.371 | 8 | 3.285 | | | | |
| | 10 | 73 | 4.332 | 14 | 5.154 | | | | |
| | 11 | 73 | 71.075 | 3 | 6.598 | | | | |
| | 12 | 73 | 52.386 | 2 | 59.749 | | | | |
| | 1 | 74 | 188.307 | 6 | 111.285 | | | | |
| | 2 | 74 | 73.057 | 3 | 133.372 | 19 | 53.802 | | |
| | 3 | 74 | 56.067 | 3 | 6.060 | 20 | 57.483 | | |
| 4706D1 | 4 | 73 | 1.065 | 14 | 0.323 | | | | |
| | 5 | 73 | 0.388 | 4 | 0.578 | | | | |
| | 6 | 73 | 0.238 | 11 | 0.144 | | | | |
| | 7 | 73 | 0.215 | 26 | 0.255 | | | | |
| | 8 | 73 | 0.048 | 15 | 0.071 | | | | |
| | 9 | 73 | 0.025 | 8 | 0.020 | | | | |
| | 10 | 73 | 0.232 | 14 | 0.042 | | | | |
| | 11 | 73 | 0.544 | 3 | 0.042 | | | | |
| | 12 | 73 | 0.379 | 2 | 0.235 | | | | |
| | 1 | 74 | 0.167 | 6 | 0.790 | | | | |
| | 2 | 74 | 0.513 | 3 | 0.592 | 19 | 0.739 | | |
| | 3 | 74 | 0.362 | 3 | 0.221 | 20 | 0.934 | | |
| 4706E1 | 4 | 73 | 3.483 | 14 | 0.782 | | | | |
| | 5 | 73 | 1.022 | 4 | 2.229 | | | | |
| | 6 | 73 | 0.623 | 11 | 0.654 | | | | |
| | 7 | 73 | 0.416 | 26 | 1.708 | | | | |
| | 8 | 73 | 0.456 | 15 | 0.951 | | | | |
| | 9 | 73 | 0.207 | 8 | 0.023 | | | | |
| | 10 | 73 | 0.816 | 14 | 0.119 | | | | |
| | 11 | 73 | 1.900 | 3 | 0.144 | | | | |
| | 12 | 73 | 1.325 | 2 | 1.478 | | | | |
| | 1 | 74 | 4.729 | 6 | 2.764 | | | | |
| | 2 | 74 | 1.557 | 3 | 2.237 | 19 | 1.741 | | |
| | 3 | 74 | 2.571 | 3 | 0.688 | 20 | 2.730 | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 04/13/76

LAKE CODE 470A CHEATHAM RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 470CF1 | 4 | 73 | 1.294 | 14 | 0.0 | | | | |
| | 5 | 73 | 0.677 | 4 | 1.130 | | | | |
| | 6 | 73 | 0.773 | 11 | 0.600 | | | | |
| | 7 | 73 | 0.170 | 26 | 0.866 | | | | |
| | 8 | 73 | 0.258 | 15 | 0.297 | | | | |
| | 9 | 73 | 0.099 | 8 | 0.014 | | | | |
| | 10 | 73 | 0.453 | 14 | 0.076 | | | | |
| | 11 | 73 | 1.059 | 3 | 0.102 | | | | |
| | 12 | 73 | 0.739 | 1 | 0.977 | | | | |
| | 1 | 74 | 2.631 | 6 | 1.538 | | | | |
| | 2 | 74 | 0.702 | 3 | 0.903 | 19 | 0.716 | | |
| | 3 | 74 | 1.433 | 3 | 0.368 | 17 | 0.977 | | |
| 470661 | 4 | 73 | 16.735 | 14 | 4.049 | | | | |
| | 5 | 73 | 11.638 | 4 | 13.394 | | | | |
| | 6 | 73 | 4.729 | 11 | 2.973 | | | | |
| | 7 | 73 | 1.212 | 26 | 2.860 | | | | |
| | 8 | 73 | 0.362 | 15 | 0.606 | | | | |
| | 9 | 73 | 0.153 | 8 | 0.244 | | | | |
| | 10 | 73 | 3.087 | 14 | 0.122 | | | | |
| | 11 | 73 | 7.221 | 3 | 0.547 | | | | |
| | 12 | 73 | 5.040 | 1 | 5.607 | | | | |
| | 1 | 74 | 17.925 | 6 | 10.477 | | | | |
| | 2 | 74 | 8.495 | 2 | 29.166 | 19 | 9.231 | | |
| | 3 | 74 | 6.626 | 3 | 2.758 | 17 | 2.888 | | |
| 4706H1 | 4 | 73 | 75.606 | 14 | 29.450 | | | | |
| | 5 | 73 | 108.454 | 4 | 84.951 | | | | |
| | 6 | 73 | 79.570 | 11 | 128.558 | | | | |
| | 7 | 73 | 20.586 | 26 | 1.130 | | | | |
| | 8 | 73 | 3.738 | 15 | 0.238 | | | | |
| | 9 | 73 | 0.597 | 8 | 0.096 | | | | |
| | 10 | 73 | 18.774 | 14 | 0.048 | | | | |
| | 11 | 73 | 63.713 | 3 | 38.228 | | | | |
| | 12 | 73 | 108.454 | 1 | 424.753 | | | | |
| | 1 | 74 | 232.481 | 6 | 286.000 | | | | |
| | 2 | 74 | 107.038 | 2 | 154.610 | 19 | 107.604 | | |
| | 3 | 74 | 45.024 | 3 | 1.082 | 17 | 1.130 | | |
| 4706J1 | 4 | 73 | 5.352 | 14 | 2.214 | | | | |
| | 5 | 73 | 2.825 | 4 | 4.078 | | | | |
| | 6 | 73 | 1.393 | 11 | 0.926 | | | | |
| | 7 | 73 | 0.821 | 26 | 0.971 | | | | |
| | 8 | 73 | 0.377 | 15 | 0.405 | | | | |
| | 9 | 73 | 0.391 | 8 | 0.156 | | | | |
| | 10 | 73 | 0.821 | 14 | 0.731 | | | | |
| | 11 | 73 | 3.087 | 3 | 0.626 | | | | |
| | 12 | 73 | 2.163 | 2 | 1.342 | | | | |
| | 1 | 74 | 7.504 | 6 | 5.493 | | | | |
| | 2 | 74 | 2.631 | 2 | 3.908 | 19 | 3.228 | | |
| | 3 | 74 | 3.058 | 3 | 2.449 | 17 | 3.058 | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 09/13/76

LAKE CODE 4706 CHEATHAM RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4706K1 | 4 | 73 | 8.353 | 14 | 2.529 | | | | |
| | 5 | 73 | 3.058 | 4 | 4.531 | | | | |
| | 6 | 73 | 1.863 | 11 | 1.130 | | | | |
| | 7 | 73 | 1.665 | 26 | 2.068 | | | | |
| | 8 | 73 | 0.377 | 15 | 0.555 | | | | |
| | 9 | 73 | 0.198 | 8 | 0.161 | | | | |
| | 10 | 73 | 1.829 | 14 | 0.323 | | | | |
| | 11 | 73 | 4.276 | 3 | 0.323 | | | | |
| | 12 | 73 | 2.973 | 2 | 1.846 | | | | |
| | 1 | 74 | 10.619 | 6 | 6.201 | | | | |
| | 2 | 74 | 4.021 | 3 | 4.644 | 19 | 5.805 | | |
| | 3 | 74 | 5.012 | 3 | 1.739 | 17 | 2.509 | | |
| 4706L1 | 4 | 73 | 3.596 | 14 | 1.220 | | | | |
| | 5 | 73 | 3.200 | 4 | 3.540 | | | | |
| | 6 | 73 | 0.680 | 11 | 0.629 | | | | |
| | 7 | 73 | 0.439 | 26 | 0.351 | | | | |
| | 8 | 73 | 0.269 | 15 | 0.320 | | | | |
| | 9 | 73 | 0.280 | 8 | 0.261 | | | | |
| | 10 | 73 | 0.300 | 14 | 0.179 | | | | |
| | 11 | 73 | 2.180 | 3 | 0.170 | | | | |
| | 12 | 73 | 1.730 | 2 | 3.087 | | | | |
| | 1 | 74 | 6.400 | 6 | 3.625 | | | | |
| | 2 | 74 | 1.750 | 3 | 2.209 | 19 | 1.419 | | |
| | 3 | 74 | 2.090 | 3 | 1.031 | 17 | 1.849 | | |
| 4706M1 | 4 | 73 | 10.619 | 14 | 3.596 | | | | |
| | 5 | 73 | 9.458 | 4 | 10.392 | | | | |
| | 6 | 73 | 2.002 | 11 | 1.855 | | | | |
| | 7 | 73 | 1.297 | 26 | 1.031 | | | | |
| | 8 | 73 | 0.793 | 15 | 0.943 | | | | |
| | 9 | 73 | 0.824 | 8 | 0.765 | | | | |
| | 10 | 73 | 1.053 | 14 | 0.501 | | | | |
| | 11 | 73 | 7.646 | 3 | 0.501 | | | | |
| | 12 | 73 | 6.060 | 2 | 9.118 | | | | |
| | 1 | 74 | 18.859 | 6 | 10.732 | | | | |
| | 2 | 74 | 5.154 | 3 | 6.513 | 19 | 4.191 | | |
| | 3 | 74 | 6.145 | 3 | 3.030 | 20 | 16.254 | | |
| 4706N1 | 4 | 73 | 1.880 | 14 | 0.634 | | | | |
| | 5 | 73 | 1.674 | 4 | 1.841 | | | | |
| | 6 | 73 | 0.354 | 11 | 0.328 | | | | |
| | 7 | 73 | 0.229 | 26 | 0.181 | | | | |
| | 8 | 73 | 0.142 | 15 | 0.167 | | | | |
| | 9 | 73 | 0.147 | 8 | 0.136 | | | | |
| | 10 | 73 | 0.156 | 14 | 0.088 | | | | |
| | 11 | 73 | 1.136 | 3 | 0.088 | | | | |
| | 12 | 73 | 0.960 | 2 | 1.614 | | | | |
| | 1 | 74 | 3.341 | 6 | 1.897 | | | | |
| | 2 | 74 | 0.912 | 3 | 1.152 | 19 | 0.739 | | |
| | 3 | 74 | 1.087 | | | | | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 09/13/76

LAKE CODE 4706 CHEATHAM RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4706Z2 | 4 | 73 | 60.598 | | | | | | |
| | 5 | 73 | 42.192 | | | | | | |
| | 6 | 73 | 19.227 | | | | | | |
| | 7 | 73 | 6.145 | | | | | | |
| | 8 | 73 | 3.143 | | | | | | |
| | 9 | 73 | 1.892 | | | | | | |
| | 10 | 73 | 6.513 | | | | | | |
| | 11 | 73 | 30.582 | | | | | | |
| | 12 | 73 | 22.059 | | | | | | |
| | 1 | 74 | 79.004 | | | | | | |
| | 2 | 74 | 33.414 | | | | | | |
| | 3 | 74 | 25.853 | | | | | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 04/13/76

LAKE CODE 4720 OLD HICKORY RESERVOIR

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 30233.1

| TRIBUTARY | SUB-DRAINAGE AREA(SQ KM) | NORMALIZED FLOWS(CMS) JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4720A1 | 27587.1 | 637.13 | 710.75 | 852.34 | 841.01 | 540.85 | 351.13 | 288.83 | 269.58 | 213.51 | 193.69 | 291.66 | 504.04 | 473.15 |
| 4720A2 | 30233.1 | 665.45 | 792.87 | 965.60 | 928.79 | 603.15 | 353.96 | 325.64 | 305.82 | 239.56 | 218.61 | 311.49 | 535.19 | 518.65 |
| 4720B1 | 92.5 | 2.59 | 4.59 | 3.43 | 2.45 | 0.83 | 1.04 | 0.54 | 0.22 | 0.48 | 0.42 | 1.40 | 2.73 | 1.71 |
| 4720C1 | 38.1 | 1.065 | 1.844 | 1.416 | 1.008 | 0.343 | 0.428 | 0.221 | 0.091 | 0.200 | 0.175 | 0.575 | 1.124 | 0.703 |
| 4720D1 | 135.2 | 3.79 | 6.68 | 5.01 | 3.57 | 1.21 | 1.52 | 0.78 | 0.33 | 0.71 | 0.62 | 2.04 | 3.99 | 2.49 |
| 4720E1 | 148.7 | 4.16 | 7.36 | 5.52 | 3.94 | 1.33 | 1.67 | 0.86 | 0.36 | 0.78 | 0.68 | 2.24 | 4.39 | 2.74 |
| 4720F1 | 86.2 | 2.41 | 4.28 | 3.20 | 2.28 | 0.77 | 0.97 | 0.50 | 0.21 | 0.45 | 0.40 | 1.30 | 2.55 | 1.59 |
| 4720G1 | 204.9 | 5.72 | 10.14 | 7.62 | 5.41 | 1.84 | 2.31 | 1.19 | 0.49 | 1.08 | 0.94 | 3.09 | 6.06 | 3.78 |
| 4720H1 | 129.8 | 3.43 | 5.69 | 4.53 | 3.34 | 1.36 | 1.02 | 0.52 | 0.44 | 0.41 | 0.24 | 1.86 | 2.86 | 2.12 |
| 4720J1 | 196.1 | 5.18 | 8.61 | 6.85 | 5.07 | 2.06 | 1.54 | 0.80 | 0.73 | 0.62 | 0.37 | 2.81 | 4.33 | 3.21 |
| 4720K1 | 75.9 | 2.01 | 3.31 | 2.66 | 1.96 | 0.80 | 0.60 | 0.31 | 0.28 | 0.24 | 0.14 | 1.09 | 1.68 | 1.24 |
| 4720L1 | 239.6 | 6.00 | 9.15 | 7.84 | 6.00 | 2.92 | 1.05 | 0.55 | 0.29 | 0.26 | 0.31 | 3.26 | 3.48 | 3.39 |
| 4720M1 | 23.7 | 0.592 | 0.983 | 0.773 | 0.592 | 0.286 | 0.104 | 0.054 | 0.029 | 0.026 | 0.031 | 0.320 | 0.345 | 0.334 |
| 4720N1 | 53.4 | 1.337 | 2.036 | 1.744 | 1.337 | 0.648 | 0.233 | 0.123 | 0.064 | 0.058 | 0.070 | 0.722 | 0.776 | 0.754 |
| 4720P1 | 104.4 | 2.61 | 3.99 | 3.40 | 2.61 | 1.27 | 0.46 | 0.24 | 0.13 | 0.11 | 0.14 | 1.42 | 1.52 | 1.47 |
| 4720Q1 | 89.1 | 2.231 | 3.398 | 2.917 | 2.231 | 1.082 | 0.391 | 0.204 | 0.107 | 0.097 | 0.117 | 1.209 | 1.297 | 1.259 |
| 4720Z2 | 884.3 | 22.34 | 37.10 | 29.45 | 21.78 | 8.86 | 6.65 | 3.43 | 1.48 | 2.68 | 2.49 | 12.09 | 18.66 | 13.76 |

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 30233.1
SUM OF SUB-DRAINAGE AREAS = 30148.7

TOTAL FLOW IN = 6186.44
TOTAL FLOW OUT = 6246.12

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4720A1 | 4 | 73 | 705.089 | 15 | 974.099 | | | | |
| | 5 | 73 | 634.297 | 12 | 962.773 | | | | |
| | 6 | 73 | 673.941 | 9 | 679.604 | | | | |
| | 7 | 73 | 610.907 | 1 | 747.565 | | | | |
| | 8 | 73 | 385.109 | 25 | 515.366 | | | | |
| | 9 | 73 | 258.250 | 2 | 447.406 | | | | |
| | 10 | 73 | 283.168 | 6 | 404.931 | | | | |
| | 11 | 73 | 390.772 | 4 | 63.996 | | | | |
| | 12 | 73 | 974.099 | 14 | 261.931 | | | | |
| | 1 | 74 | 2681.288 | 9 | 1730.159 | | | | |
| | 2 | 74 | 1588.575 | 3 | 1962.357 | 17 | 1401.684 | | |
| | 3 | 74 | 988.258 | 4 | 874.990 | 25 | 1291.248 | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 09/13/76

LAKE CODE 4720 OLD HICKORY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4720A2 | 4 | 73 | 1008.050 | | | | | | |
| | 5 | 73 | 942.951 | 4 | 767.386 | 12 | 1019.406 | | |
| | 6 | 73 | 982.594 | 9 | 690.931 | | | | |
| | 7 | 73 | 724.911 | 1 | 917.466 | 28 | 1101.525 | | |
| | 8 | 73 | 461.564 | | | | | | |
| | 9 | 73 | 206.147 | 2 | 280.903 | | | | |
| | 10 | 73 | 241.260 | 6 | 498.376 | | | | |
| | 11 | 73 | 484.218 | 4 | 73.624 | | | | |
| | 12 | 73 | 951.446 | 15 | 427.584 | | | | |
| | 1 | 74 | 2180.397 | 9 | 1993.506 | | | | |
| | 2 | 74 | 1588.575 | 3 | 2370.120 | 17 | 1251.604 | | |
| | 3 | 74 | 996.753 | 4 | 795.703 | 25 | 1427.169 | | |
| 4720B1 | 4 | 73 | 4.049 | 15 | 1.577 | | | | |
| | 5 | 73 | 4.672 | 12 | 1.475 | | | | |
| | 6 | 73 | 1.334 | 9 | 1.405 | | | | |
| | 7 | 73 | 0.606 | 1 | 0.405 | 28 | 0.617 | | |
| | 8 | 73 | 0.362 | | | | | | |
| | 9 | 73 | 0.181 | 2 | 0.153 | | | | |
| | 10 | 73 | 0.283 | 6 | 0.102 | | | | |
| | 11 | 73 | 3.739 | 4 | 0.343 | | | | |
| | 12 | 73 | 2.557 | 14 | 0.425 | | | | |
| | 1 | 74 | 6.541 | 9 | 13.960 | | | | |
| | 2 | 74 | 3.625 | 3 | 7.362 | 17 | 3.115 | | |
| | 3 | 74 | 2.945 | 4 | 1.821 | 25 | 2.659 | | |
| 4720C1 | 4 | 73 | 1.665 | 15 | 0.648 | | | | |
| | 5 | 73 | 1.923 | 12 | 0.609 | | | | |
| | 6 | 73 | 0.549 | 9 | 0.578 | | | | |
| | 7 | 73 | 0.249 | 1 | 0.167 | 28 | 0.255 | | |
| | 8 | 73 | 0.150 | | | | | | |
| | 9 | 73 | 0.074 | 2 | 0.062 | | | | |
| | 10 | 73 | 0.116 | 6 | 0.042 | | | | |
| | 11 | 73 | 1.535 | 4 | 0.142 | | | | |
| | 12 | 73 | 1.053 | 14 | 0.176 | | | | |
| | 1 | 74 | 0.269 | 9 | 5.748 | | | | |
| | 2 | 74 | 1.489 | 3 | 3.030 | 17 | 1.277 | | |
| | 3 | 74 | 1.206 | 4 | 0.750 | 25 | 1.096 | | |
| 4720D1 | 4 | 73 | 5.918 | 15 | 2.305 | | | | |
| | 5 | 73 | 6.824 | 12 | 2.158 | | | | |
| | 6 | 73 | 1.951 | 9 | 2.056 | | | | |
| | 7 | 73 | 0.886 | 1 | 0.592 | 28 | 0.900 | | |
| | 8 | 73 | 0.532 | | | | | | |
| | 9 | 73 | 0.266 | 2 | 0.221 | | | | |
| | 10 | 73 | 0.413 | 6 | 0.147 | | | | |
| | 11 | 73 | 5.465 | 4 | 0.501 | | | | |
| | 12 | 73 | 3.738 | 14 | 0.420 | | | | |
| | 1 | 74 | 9.571 | 9 | 20.388 | | | | |
| | 2 | 74 | 5.295 | 3 | 10.789 | 17 | 4.531 | | |
| | 3 | 74 | 4.276 | 4 | 2.662 | 25 | 3.879 | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 09/13/76

LAKE CODE 4720 OLD HICKORY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 472.5I | 4 | 73 | 6.513 | 15 | 2.534 | | | | |
| | 5 | 73 | 7.504 | 12 | 2.373 | | | | |
| | 6 | 73 | 2.146 | 9 | 2.260 | | | | |
| | 7 | 73 | 0.974 | 1 | 0.651 | 28 | 0.991 | | |
| | 8 | 73 | 0.584 | | | | | | |
| | 9 | 73 | 0.292 | 2 | 0.244 | | | | |
| | 10 | 73 | 0.456 | 6 | 0.161 | | | | |
| | 11 | 73 | 6.003 | 4 | 0.552 | | | | |
| | 12 | 73 | 4.106 | 14 | 0.682 | | | | |
| | 1 | 74 | 10.477 | 9 | 22.427 | | | | |
| | 2 | 74 | 5.805 | 3 | 11.836 | 17 | 4.984 | | |
| | 3 | 74 | 4.701 | 4 | 2.917 | 25 | 4.276 | | |
| 4720F1 | 4 | 73 | 3.764 | 15 | 1.470 | | | | |
| | 5 | 73 | 4.361 | 12 | 1.376 | | | | |
| | 6 | 73 | 1.246 | 9 | 1.311 | | | | |
| | 7 | 73 | 0.566 | 1 | 0.377 | 28 | 0.575 | | |
| | 8 | 73 | 0.340 | | | | | | |
| | 9 | 73 | 0.170 | 2 | 0.142 | | | | |
| | 10 | 73 | 0.263 | 6 | 0.093 | | | | |
| | 11 | 73 | 3.483 | 4 | 0.320 | | | | |
| | 12 | 73 | 2.384 | 14 | 0.396 | | | | |
| | 1 | 74 | 6.116 | 9 | 13.026 | | | | |
| | 2 | 74 | 3.370 | 3 | 6.881 | 17 | 2.888 | | |
| | 3 | 74 | 2.735 | 4 | 1.696 | 25 | 2.481 | | |
| 4720G1 | 4 | 73 | 8.948 | 15 | 3.483 | | | | |
| | 5 | 73 | 10.336 | 12 | 3.256 | | | | |
| | 6 | 73 | 2.945 | 9 | 3.115 | | | | |
| | 7 | 73 | 1.345 | 1 | 0.895 | 28 | 1.365 | | |
| | 8 | 73 | 0.807 | | | | | | |
| | 9 | 73 | 0.402 | 2 | 0.337 | | | | |
| | 10 | 73 | 0.626 | 6 | 0.227 | | | | |
| | 11 | 73 | 8.269 | 4 | 0.784 | | | | |
| | 12 | 73 | 5.663 | 14 | 0.940 | | | | |
| | 1 | 74 | 14.527 | 9 | 30.865 | | | | |
| | 2 | 74 | 8.014 | 3 | 16.339 | 17 | 6.881 | | |
| | 3 | 74 | 6.485 | 4 | 4.021 | 25 | 5.490 | | |
| 4720H1 | 4 | 73 | 5.663 | 15 | 2.214 | | | | |
| | 5 | 73 | 6.541 | 12 | 2.070 | | | | |
| | 6 | 73 | 1.872 | 9 | 1.971 | | | | |
| | 7 | 73 | 0.852 | 1 | 0.566 | 28 | 0.866 | | |
| | 8 | 73 | 0.510 | | | | | | |
| | 9 | 73 | 0.255 | 2 | 0.212 | | | | |
| | 10 | 73 | 0.396 | 6 | 0.142 | | | | |
| | 11 | 73 | 5.239 | 4 | 0.496 | | | | |
| | 12 | 73 | 3.596 | 14 | 0.595 | | | | |
| | 1 | 74 | 9.203 | 9 | 19.567 | | | | |
| | 2 | 74 | 5.069 | 3 | 10.336 | 17 | 4.361 | | |
| | 3 | 74 | 4.106 | 4 | 2.554 | 25 | 3.738 | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 09/13/76

LAKE CODE 4720 OLD HICKORY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 472001 | 4 | 73 | 8.580 | 15 | 3.341 | | | | |
| | 5 | 73 | 9.911 | 12 | 4.559 | | | | |
| | 6 | 73 | 2.829 | 9 | 2.973 | | | | |
| | 7 | 73 | 1.286 | 1 | 0.858 | 28 | 1.308 | | |
| | 8 | 73 | 0.770 | | | | | | |
| | 9 | 73 | 0.385 | 2 | 0.323 | | | | |
| | 10 | 73 | 0.600 | 6 | 0.215 | | | | |
| | 11 | 73 | 7.900 | 4 | 0.728 | | | | |
| | 12 | 73 | 5.437 | 14 | 0.900 | | | | |
| | 1 | 74 | 13.875 | 9 | 29.450 | | | | |
| | 2 | 74 | 7.674 | 3 | 15.631 | 17 | 6.570 | | |
| | 3 | 74 | 6.230 | 4 | 3.851 | 25 | 5.635 | | |
| 472051 | 4 | 73 | 3.313 | 15 | 1.294 | | | | |
| | 5 | 73 | 3.823 | 12 | 1.212 | | | | |
| | 6 | 73 | 1.096 | 9 | 1.152 | | | | |
| | 7 | 73 | 0.498 | 2 | 0.331 | 28 | 0.507 | | |
| | 8 | 73 | 0.297 | | | | | | |
| | 9 | 73 | 0.150 | 2 | 0.125 | | | | |
| | 10 | 73 | 0.232 | 6 | 0.082 | | | | |
| | 11 | 73 | 3.059 | 4 | 0.283 | | | | |
| | 12 | 73 | 2.098 | 14 | 0.348 | | | | |
| | 1 | 74 | 5.380 | 9 | 11.440 | | | | |
| | 2 | 74 | 2.973 | 3 | 6.060 | 17 | 2.549 | | |
| | 3 | 74 | 2.407 | 4 | 1.492 | 25 | 2.183 | | |
| 472061 | 4 | 73 | 10.477 | 15 | 4.078 | | | | |
| | 5 | 73 | 12.091 | 12 | 3.823 | | | | |
| | 6 | 73 | 3.455 | 9 | 3.653 | | | | |
| | 7 | 73 | 1.572 | 2 | 1.048 | 28 | 1.597 | | |
| | 8 | 73 | 0.943 | | | | | | |
| | 9 | 73 | 0.470 | 2 | 0.394 | | | | |
| | 10 | 73 | 0.733 | 6 | 0.263 | | | | |
| | 11 | 73 | 9.656 | 4 | 0.889 | | | | |
| | 12 | 73 | 6.626 | 14 | 1.099 | | | | |
| | 1 | 74 | 16.962 | 9 | 36.246 | | | | |
| | 2 | 74 | 9.373 | 3 | 19.086 | 17 | 8.042 | | |
| | 3 | 74 | 7.589 | 4 | 4.701 | 25 | 6.881 | | |
| 472081 | 4 | 73 | 1.036 | 15 | 0.405 | | | | |
| | 5 | 73 | 1.195 | 12 | 0.258 | | | | |
| | 6 | 73 | 0.343 | 9 | 0.360 | | | | |
| | 7 | 73 | 0.156 | 1 | 0.102 | 28 | 0.159 | | |
| | 8 | 73 | 0.093 | | | | | | |
| | 9 | 73 | 0.045 | 2 | 0.040 | | | | |
| | 10 | 73 | 0.074 | 6 | 0.025 | | | | |
| | 11 | 73 | 0.954 | 4 | 0.088 | | | | |
| | 12 | 73 | 0.654 | 15 | 0.105 | | | | |
| | 1 | 74 | 1.676 | 9 | 3.569 | | | | |
| | 2 | 74 | 0.929 | 3 | 1.886 | 17 | 0.796 | | |
| | 3 | 74 | 0.750 | 4 | 0.464 | 25 | 0.680 | | |

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 04/13/76

LAKE CODE 4730 OLD HICKORY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | FLOW |
|---|---|---|---|---|---|---|---|---|
| 472[illegible]1 | 4 | 73 | 2.333 | 15 | 0.90[illegible] | | | |
| | 5 | 73 | 2.696 | 12 | 0.852 | | | |
| | 6 | 73 | 0.770 | 9 | 0.810 | | | |
| | 7 | 73 | 0.351 | 1 | 0.232 | 28 | 0.357 | |
| | 8 | 73 | 0.210 | | | | | |
| | 9 | 73 | 0.105 | 2 | 0.088 | | | |
| | 10 | 73 | 0.164 | 6 | 0.059 | | | |
| | 11 | 73 | 2.158 | 4 | 0.198 | | | |
| | 12 | 73 | 1.475 | 15 | 0.232 | | | |
| | 1 | 74 | 3.766 | 9 | 8.042 | | | |
| | 2 | 74 | 2.087 | 3 | 4.248 | 17 | 1.790 | |
| 472[illegible]1 | 3 | 74 | 1.691 | 4 | 1.051 | 25 | 1.535 | |
| | 4 | 73 | 4.559 | 15 | 1.781 | | | |
| | 5 | 73 | 5.267 | 12 | 1.665 | | | |
| | 6 | 73 | 1.506 | 9 | 1.586 | | | |
| | 7 | 73 | 0.685 | 1 | 0.456 | 28 | 0.697 | |
| | 8 | 73 | 0.411 | | | | | |
| | 9 | 73 | 0.204 | 2 | 0.170 | | | |
| | 10 | 73 | 0.320 | 6 | 0.113 | | | |
| | 11 | 73 | 4.219 | 4 | 0.096 | | | |
| | 12 | 73 | 2.888 | 15 | 0.456 | | | |
| | 1 | 74 | 7.391 | 9 | 15.744 | | | |
| | 2 | 74 | 4.078 | 3 | 8.325 | 17 | 3.511 | |
| 472001 | 3 | 74 | 3.313 | 4 | 2.053 | 25 | 3.002 | |
| | 4 | 73 | 3.908 | 15 | 1.521 | | | |
| | 5 | 73 | 4.502 | 12 | 1.422 | | | |
| | 6 | 73 | 1.286 | 9 | 1.354 | | | |
| | 7 | 73 | 0.583 | 1 | 0.391 | 28 | 0.351 | |
| | 8 | 73 | 0.351 | | | | | |
| | 9 | 73 | 0.174 | 2 | 0.147 | | | |
| | 10 | 73 | 0.272 | 6 | 0.096 | | | |
| | 11 | 73 | 3.596 | 4 | 0.331 | | | |
| | 12 | 73 | 2.464 | 15 | 0.391 | | | |
| | 1 | 74 | 6.315 | 9 | 13.451 | | | |
| | 2 | 74 | 3.483 | 3 | 7.108 | 17 | 3.002 | |
| 472[illegible]ZZ | 3 | 74 | 2.826 | 4 | 1.753 | 25 | 2.563 | |
| | 4 | 73 | 36.812 | | | | | |
| | 5 | 73 | 42.758 | | | | | |
| | 6 | 73 | 12.176 | | | | | |
| | 7 | 73 | 5.550 | | | | | |
| | 8 | 73 | 3.313 | | | | | |
| | 9 | 73 | 1.662 | | | | | |
| | 10 | 73 | 2.585 | | | | | |
| | 11 | 73 | 33.980 | | | | | |
| | 12 | 73 | 23.361 | | | | | |
| | 1 | 74 | 59.749 | | | | | |
| | 2 | 74 | 33.131 | | | | | |
| | 3 | 74 | 26.759 | | | | | |

40

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 04/13/76

LAKE CODE 4723 J. PERCY PRIEST RESERVOIR

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 2310.3

| TRIBUTARY | SUB-DRAINAGE AREA(SQ KM) | NORMALIZED FLOWS(CMS) JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4723A1 | 771.8 | 24.21 | 28.88 | 27.58 | 19.48 | 13.17 | 4.90 | 3.62 | 3.03 | 3.03 | 3.20 | 9.50 | 19.82 | 13.31 |
| 4723B1 | 650.1 | 17.70 | 20.53 | 17.27 | 16.20 | 15.86 | 6.46 | 3.99 | 3.06 | 1.70 | 1.70 | 3.91 | 18.63 | 10.54 |
| 4723C1 | 165.9 | 4.64 | 8.21 | 6.17 | 4.39 | 1.49 | 1.87 | 0.96 | 0.40 | 0.87 | 0.76 | 2.50 | 4.90 | 3.06 |
| 4723D1 | 98.9 | 2.77 | 4.93 | 3.68 | 2.62 | 0.89 | 1.11 | 0.57 | 0.24 | 0.52 | 0.45 | 1.49 | 2.92 | 1.83 |
| 4723E1 | 2310.3 | 82.97 | 91.75 | 81.16 | 48.14 | 40.49 | 32.00 | 5.72 | 11.33 | 7.25 | 24.24 | 32.00 | 53.52 | 40.58 |
| 4723F1 | 59.8 | 1.269 | 1.778 | 1.858 | 1.713 | 0.980 | 0.399 | 0.157 | 0.150 | 0.065 | 0.177 | 0.360 | 1.257 | 0.842 |
| 4723G1 | 147.4 | 4.81 | 7.65 | 5.41 | 4.28 | 1.98 | 0.39 | 0.21 | 0.32 | 0.34 | 0.40 | 1.21 | 2.68 | 2.44 |
| 4723H1 | 28.5 | 0.929 | 1.478 | 1.048 | 0.827 | 0.382 | 0.075 | 0.040 | 0.062 | 0.065 | 0.078 | 0.234 | 0.518 | 0.472 |
| 4723ZZ | 336.7 | 9.85 | 11.64 | 10.51 | 8.47 | 8.35 | 2.72 | 1.84 | 1.47 | 1.10 | 1.14 | 3.17 | 9.12 | 5.76 |

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 2310.3
SUM OF SUB-DRAINAGE AREAS = 2259.0
TOTAL FLOW IN = 462.00
TOTAL FLOW OUT = 490.56

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4723A1 | 4 | 73 | 37.661 | 13 | 13.592 | | | | |
| | 5 | 73 | 55.784 | 14 | 16.452 | | | | |
| | 6 | 73 | 13.082 | 14 | 17.047 | | | | |
| | 7 | 73 | 7.594 | 14 | 3.455 | | | | |
| | 8 | 73 | 2.860 | 14 | 6.400 | | | | |
| | 9 | 73 | 1.529 | 13 | 1.266 | | | | |
| | 10 | 73 | 2.784 | 15 | 2.860 | | | | |
| | 11 | 73 | 38.228 | 14 | 2.195 | | | | |
| | 12 | 73 | 27.835 | 18 | 2.945 | | | | |
| | 1 | 74 | 71.358 | 14 | 26.759 | | | | |
| | 2 | 74 | 32.564 | 1 | 19.397 | 15 | 22.370 | | |
| | 3 | 74 | 23.361 | 1 | 10.534 | 15 | 10.052 | | |
| 4723B1 | 4 | 73 | 29.733 | 13 | 13.790 | | | | |
| | 5 | 73 | 37.945 | 14 | 8.042 | | | | |
| | 6 | 73 | 11.100 | 14 | 10.874 | | | | |
| | 7 | 73 | 4.559 | 14 | 2.973 | | | | |
| | 8 | 73 | 2.274 | 14 | 4.417 | | | | |
| | 9 | 73 | 1.138 | 13 | 10.166 | | | | |
| | 10 | 73 | 1.991 | 15 | 2.274 | | | | |
| | 11 | 73 | 27.156 | 14 | 2.415 | | | | |
| | 12 | 73 | 24.721 | 18 | 4.049 | | | | |
| | 1 | 74 | 63.713 | 14 | 40.776 | | | | |
| | 2 | 74 | 27.920 | 1 | 21.747 | 15 | 21.747 | | |
| | 3 | 74 | 15.433 | 1 | 8.948 | 15 | 5.409 | | |

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TRIBUTARY FLOW INFORMATION FOR TENNESSEE 04/13/76

LAKE CODE 4723 J. PERCY PRIEST RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4723C1 | 4 | 73 | 4.070 | 13 | 2.917 | | | | |
| | 5 | 73 | 11.950 | 14 | 3.540 | | | | |
| | 6 | 73 | 2.809 | 14 | 3.653 | | | | |
| | 7 | 73 | 1.614 | 14 | 0.0 | | | | |
| | 8 | 73 | 0.617 | 14 | 1.376 | | | | |
| | 9 | 73 | 0.326 | 13 | 0.0 | | | | |
| | 10 | 73 | 0.597 | 15 | 0.0 | | | | |
| | 11 | 73 | 8.240 | 14 | 0.0 | | | | |
| | 12 | 73 | 5.975 | 18 | 0.634 | | | | |
| | 1 | 74 | 15.348 | 14 | 6.711 | | | | |
| | 2 | 74 | 6.966 | 1 | 4.163 | 15 | 4.814 | | |
| | 3 | 74 | 5.012 | 1 | 2.265 | 15 | 2.158 | | |
| 4723D1 | 4 | 73 | 4.814 | 13 | 1.741 | | | | |
| | 5 | 73 | 7.136 | 14 | 2.110 | | | | |
| | 6 | 73 | 1.676 | 14 | 2.186 | | | | |
| | 7 | 73 | 0.963 | 14 | 0.445 | | | | |
| | 8 | 73 | 0.368 | 14 | 0.821 | | | | |
| | 9 | 73 | 0.195 | 13 | 0.0 | | | | |
| | 10 | 73 | 0.357 | 15 | 0.0 | | | | |
| | 11 | 73 | 4.899 | 14 | 0.0 | | | | |
| | 12 | 73 | 3.568 | 18 | 0.379 | | | | |
| | 1 | 74 | 9.175 | 14 | 3.993 | | | | |
| | 2 | 74 | 4.163 | 1 | 2.489 | 15 | 2.860 | | |
| | 3 | 74 | 3.002 | 1 | 1.354 | 15 | 1.288 | | |
| 4723E1 | 4 | 73 | 69.093 | 13 | 44.457 | | | | |
| | 5 | 73 | 103.923 | 14 | 130.257 | | | | |
| | 6 | 73 | 77.588 | 14 | 70.509 | | | | |
| | 7 | 73 | 20.105 | 14 | 0.0 | | | | |
| | 8 | 73 | 3.596 | 14 | 0.0 | | | | |
| | 9 | 73 | 0.538 | 13 | 16.282 | | | | |
| | 10 | 73 | 17.585 | 15 | 16.282 | | | | |
| | 11 | 73 | 13.960 | 14 | 27.128 | | | | |
| | 12 | 73 | 38.652 | 18 | 22.653 | | | | |
| | 1 | 74 | 225.402 | 14 | 141.584 | | | | |
| | 2 | 74 | 103.923 | 1 | 143.566 | 15 | 80.986 | | |
| | 3 | 74 | 42.589 | 1 | 57.766 | 15 | 0.0 | | |
| 4723F1 | 4 | 73 | 2.727 | 13 | 1.269 | | | | |
| | 5 | 73 | 3.483 | 14 | 0.739 | | | | |
| | 6 | 73 | 1.019 | 14 | 1.000 | | | | |
| | 7 | 73 | 0.419 | 14 | 0.275 | | | | |
| | 8 | 73 | 0.210 | 14 | 0.405 | | | | |
| | 9 | 73 | 0.105 | 13 | 0.934 | | | | |
| | 10 | 73 | 0.184 | 15 | 0.210 | | | | |
| | 11 | 73 | 2.498 | 14 | 0.224 | | | | |
| | 12 | 73 | 2.277 | 18 | 0.374 | | | | |
| | 1 | 74 | 5.862 | 14 | 3.766 | | | | |
| | 2 | 74 | 2.571 | 1 | 2.002 | 15 | 2.002 | | |
| | 3 | 74 | 1.419 | 1 | 0.824 | 15 | 0.498 | | |

4/2

TRIBUTARY FLOW INFORMATION FOR TENNESSEE 04/13/75

LAKE CODE 4723 J. PERCY PRIEST RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4723G1 | 4 | 73 | 6.711 | 13 | 3.115 | | | | |
| | 5 | 73 | 8.580 | 14 | 1.821 | | | | |
| | 6 | 73 | 2.515 | 14 | 2.466 | | | | |
| | 7 | 73 | 1.031 | 14 | 0.677 | | | | |
| | 8 | 73 | 0.515 | 14 | 1.000 | | | | |
| | 9 | 73 | 0.258 | 13 | 2.305 | | | | |
| | 10 | 73 | 0.450 | 15 | 0.515 | | | | |
| | 11 | 73 | 6.145 | 14 | 0.547 | | | | |
| | 12 | 73 | 5.607 | 18 | 0.917 | | | | |
| | 1 | 74 | 14.413 | 14 | 9.260 | | | | |
| | 2 | 74 | 6.343 | 1 | 4.927 | 15 | 4.927 | | |
| | 3 | 74 | 3.483 | 1 | 2.030 | 15 | 1.223 | | |
| 4723H1 | 4 | 73 | 1.360 | 13 | 0.603 | | | | |
| | 5 | 73 | 1.657 | 14 | 0.351 | | | | |
| | 6 | 73 | 0.487 | 14 | 0.476 | | | | |
| | 7 | 73 | 0.198 | 14 | 0.130 | | | | |
| | 8 | 73 | 0.099 | 14 | 0.193 | | | | |
| | 9 | 73 | 0.051 | 13 | 0.0 | | | | |
| | 10 | 73 | 0.088 | 15 | 0.0 | | | | |
| | 11 | 73 | 1.189 | 14 | 0.0 | | | | |
| | 12 | 73 | 1.085 | 18 | 0.178 | | | | |
| | 1 | 74 | 2.789 | 14 | 1.787 | | | | |
| | 2 | 74 | 1.223 | 1 | 0.954 | 15 | 0.954 | | |
| | 3 | 74 | 0.677 | 1 | 0.394 | 15 | 0.238 | | |
| 4723Z2 | 4 | 73 | 15.914 | | | | | | |
| | 5 | 73 | 21.946 | | | | | | |
| | 6 | 73 | 5.748 | | | | | | |
| | 7 | 73 | 2.803 | | | | | | |
| | 8 | 73 | 1.215 | | | | | | |
| | 9 | 73 | 0.626 | | | | | | |
| | 10 | 73 | 1.104 | | | | | | |
| | 11 | 73 | 15.376 | | | | | | |
| | 12 | 73 | 12.488 | | | | | | |
| | 1 | 74 | 31.998 | | | | | | |
| | 2 | 74 | 14.328 | | | | | | |
| | 3 | 74 | 9.090 | | | | | | |

# APPENDIX C

# PHYSICAL AND CHEMICAL DATA

STORET RETRIEVAL DATE 76/04/10

470601
36 19 09.0 087 13 34.0 3
CHEATHAM RESERVOIR
47043 TENNESSEE
052091

11EPALES 2111202
00034 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/21 | 15 00 | 0000 | 17.8 | | 24 | 175 | 7.70 | 59 | 0.060 | 0.400 | 0.400 | 0.040 |
| | 15 00 | 0004 | 17.8 | 9.4 | | 170 | 7.80 | 56 | 0.060 | 0.200 | 0.390 | 0.037 |
| | 15 00 | 0015 | 17.7 | 9.8 | | 170 | 7.80 | 55 | 0.060 | 0.500 | 0.410 | 0.034 |
| | 15 00 | 0031 | 17.7 | 9.6 | | 175 | 7.90 | 56 | 0.060 | 0.400 | 0.410 | 0.034 |
| 73/08/16 | 09 45 | 0000 | 25.3 | | 28 | 171 | 7.70 | 60 | 0.190 | 0.800 | 0.290 | 0.131 |
| | 09 45 | 0005 | 25.1 | 5.6 | | 170 | 7.50 | 57 | 0.170 | 0.300 | 0.290 | 0.127 |
| | 09 45 | 0015 | 25.1 | 5.4 | | 169 | 7.40 | 58 | 0.180 | 0.400 | 0.300 | 0.120 |
| | 09 45 | 0035 | 25.0 | 5.8 | | 170 | 7.30 | 59 | 0.170 | 0.300 | 0.280 | 0.101 |
| 73/10/23 | 16 00 | 0000 | 29.7 | | 33 | 173 | 7.40 | 58 | 0.160 | 0.900 | 0.370 | 0.093 |
| | 16 00 | 0005 | 29.6 | | | 169 | 7.40 | 59 | 0.160 | 0.300 | 0.380 | 0.086 |
| | 16 00 | 0015 | 29.6 | 5.8 | | 170 | 7.30 | 60 | 0.160 | 0.200 | 0.360 | 0.085 |
| | 16 00 | 0034 | 29.6 | 5.8 | | 171 | 7.30 | 61 | 0.160 | 0.300 | 0.360 | 0.077 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/21 | 15 00 | 0000 | 0.071 | 4.5 |
| | 15 00 | 0004 | 0.076 | |
| | 15 00 | 0015 | 0.107 | |
| | 15 00 | 0031 | 0.111 | |
| 73/08/16 | 09 45 | 0000 | 0.192 | 6.0 |
| | 09 45 | 0005 | 0.203 | |
| | 09 45 | 0015 | 0.203 | |
| | 09 45 | 0035 | 0.185 | |
| 73/10/23 | 16 00 | 0000 | 0.165 | 11.5 |
| | 16 00 | 0005 | 0.158 | |
| | 16 00 | 0015 | 0.141 | |
| | 16 00 | 0034 | 0.124 | |

STORET RETRIEVAL DATE 74/09/10

470602
36 18 20.0 087 09 10.0 3
CHEATHAM RESERVOIR
47021 TENNESSEE
052091

11EPALES 2111202
0034 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/21 | 16 | 25 0000 | 17.5 | | 18 | 175 | 6.90 | 53 | 0.070 | 0.500 | 0.390 | 0.030 |
| | 16 | 25 0004 | 17.5 | 9.8 | | 165 | 7.20 | 52 | 0.060 | 0.400 | 0.380 | 0.030 |
| | 16 | 25 0015 | 17.5 | 9.8 | | 160 | 7.30 | 52 | 0.050 | 0.400 | 0.380 | 0.029 |
| | 16 | 25 0030 | 17.5 | 9.8 | | 160 | 7.40 | 52 | 0.060 | 0.400 | 0.390 | 0.026 |
| 73/08/16 | 10 | 30 0000 | 24.9 | | 28 | 180 | 7.30 | 63 | 0.120 | 0.300 | 0.320 | 0.088 |
| | 10 | 30 0005 | 24.6 | 6.6 | | 178 | 7.30 | 62 | 0.110 | 0.200 | 0.320 | 0.085 |
| | 10 | 30 0015 | 24.6 | 6.4 | | 178 | 7.20 | 62 | 0.120 | 0.400 | 0.340 | 0.086 |
| | 10 | 30 0024 | 24.5 | 6.4 | | 178 | 7.20 | 62 | 0.110 | 0.300 | 0.320 | 0.084 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/21 | 16 | 25 0000 | 0.101 | 8.6 |
| | 16 | 25 0004 | 0.100 | |
| | 16 | 25 0015 | 0.099 | |
| | 16 | 25 0030 | 0.100 | |
| 73/08/16 | 10 | 30 0000 | 0.143 | 10.2 |
| | 10 | 30 0005 | 0.167 | |
| | 10 | 30 0015 | 0.221 | |
| | 10 | 30 0024 | 0.240 | |

STORET RETRIEVAL DATE 76/04/10

472001
36 17 40.0 086 39 15.0 3
OLD HICKORY LAKE
47037 TENNESSEE

052091

11EPALES 2111202
0034 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/22 | 09 20 | 0000 | 17.3 | | 23 | 160 | 7.70 | 32 | 0.040 | 0.400 | 0.290 | 0.014 |
| | 09 20 | 0004 | 17.3 | 10.0 | | 160 | 7.80 | 31 | 0.030 | 0.200 | 0.340 | 0.017 |
| | 09 20 | 0015 | 16.9 | 10.0 | | 160 | 7.80 | 32 | 0.030 | 0.300 | 0.490 | 0.034 |
| | 09 20 | 0030 | 16.9 | 9.8 | | 165 | 7.70 | 64 | 0.040 | 0.300 | 0.580 | 0.036 |
| 73/08/16 | 11 15 | 0000 | 26.0 | | 40 | 153 | 8.30 | 52 | 0.070 | 0.400 | 0.070 | 0.010 |
| | 11 15 | 0005 | 26.0 | 11.6 | | 155 | 8.40 | 51 | 0.060 | 0.200 | 0.060 | 0.018 |
| | 11 15 | 0020 | 25.2 | 10.6 | | 151 | 7.60 | 51 | 0.070 | 0.400 | 0.080 | 0.019 |
| | 11 15 | 0040 | 23.9 | 5.6 | | 156 | 7.50 | 52 | 0.080 | 0.400 | 0.190 | 0.026 |
| | 11 15 | 0060 | 22.6 | 6.6 | | 146 | 7.30 | 52 | 0.120 | 0.300 | 0.280 | 0.051 |
| | 11 15 | 0075 | 22.5 | 6.8 | | 144 | 7.20 | 53 | 0.130 | 0.400 | 0.300 | 0.055 |
| 73/10/22 | 14 29 | 0000 | 21.4 | | 36 | 137 | 8.60 | 53 | 0.060 | 0.600 | 0.230 | 0.032 |
| | 14 29 | 0005 | 21.3 | 10.0 | | 137 | 8.60 | 52 | 0.030 | 0.400 | 0.220 | 0.031 |
| | 14 29 | 0015 | 20.3 | 8.0 | | 134 | 7.80 | 49 | 0.040 | 0.400 | 0.240 | 0.035 |
| | 14 29 | 0035 | 20.1 | 7.4 | | 134 | 7.70 | 50 | 0.060 | 0.300 | 0.260 | 0.038 |
| | 14 29 | 0065 | 20.0 | 7.2 | | 133 | 7.60 | 50 | 0.070 | 0.200 | 0.240 | 0.036 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/22 | 09 20 | 0000 | 0.064 | 8.1 |
| | 09 20 | 0004 | 0.058 | |
| | 09 20 | 0015 | 0.085 | |
| | 09 20 | 0030 | 0.105 | |
| 73/08/16 | 11 15 | 0000 | 0.033 | 24.0 |
| | 11 15 | 0005 | 0.054 | |
| | 11 15 | 0020 | 0.053 | |
| | 11 15 | 0040 | 0.063 | |
| | 11 15 | 0060 | 0.088 | |
| | 11 15 | 0075 | 0.103 | |
| 73/10/22 | 14 29 | 0000 | 0.104 | 16.8 |
| | 14 29 | 0005 | 0.097 | |
| | 14 29 | 0015 | 0.086 | |
| | 14 29 | 0035 | 0.086 | |
| | 14 29 | 0065 | 0.120 | |

STORET RETRIEVAL DATE 76/09/10

472002
36 14 42.0 086 36 35.0 3
OLD HICKORY LAKE
47037 TENNESSEE

052091

11E-ALES 2111202
0056 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/22 | 10 00 | 0000 | 18.1 | | 30 | 160 | 8.40 | 70 | 0.030 | 0.300 | 0.190 | 0.017 |
| | 10 00 | 0004 | 17.0 | 10.2 | | 160 | 8.10 | 66 | 0.030 | 0.200 | 0.300 | 0.016 |
| | 10 00 | 0015 | 16.8 | 10.0 | | 160 | 8.00 | 66 | 0.030 | 0.200 | 0.300 | 0.013 |
| | 10 00 | 0040 | 16.6 | 10.0 | | 160 | 7.90 | 65 | 0.020 | 0.200K | 0.300 | 0.018 |
| | 10 00 | 0064 | 16.4 | 10.0 | | 160 | 7.80 | 58 | 0.030 | 0.200K | 0.310 | 0.024 |
| 73/08/16 | 13 50 | 0000 | 27.0 | | 40 | 146 | 8.60 | 52 | 0.090 | 1.000 | 0.080 | 0.006 |
| | 13 50 | 0005 | 26.8 | 12.2 | | 151 | 8.40 | 50 | 0.070 | 0.800 | 0.070 | 0.013 |
| | 13 50 | 0025 | 22.6 | 6.6 | | 139 | 7.50 | 51 | 0.120 | 0.600 | 0.300 | 0.020 |
| | 13 50 | 0045 | 22.1 | 6.6 | | 137 | 7.40 | 53 | 0.120 | 0.600 | 0.310 | 0.026 |
| | 13 50 | 0070 | 22.0 | 6.2 | | 136 | 7.30 | 54 | 0.120 | 0.600 | 0.310 | 0.030 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/22 | 10 00 | 0000 | 0.073 | 9.4 |
| | 10 00 | 0004 | 0.057 | |
| | 10 00 | 0015 | 0.057 | |
| | 10 00 | 0040 | 0.058 | |
| | 10 00 | 0064 | 0.061 | |
| 73/08/16 | 13 50 | 0000 | 0.043 | 11.1 |
| | 13 50 | 0005 | 0.045 | |
| | 13 50 | 0025 | 0.045 | |
| | 13 50 | 0045 | 0.082 | |
| | 13 50 | 0070 | 0.102 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/10

472003
36 18 30.0 086 33 45.0 3
OLD HICKORY LAKE
47165 TENNESSEE

052091

11EMALES 2111202
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/22 | 10 | 30 0000 | 16.7 | | 18 | 155 | 7.80 | 58 | 0.030 | 0.200 | 0.310 | 0.014 |
| | 10 | 30 0004 | 16.6 | 10.0 | | 155 | 7.80 | 59 | 0.030 | 0.200K | 0.310 | 0.015 |
| | 10 | 30 0015 | 16.5 | 10.0 | | 155 | 7.80 | 59 | 0.030 | 0.200K | 0.310 | 0.015 |
| | 10 | 30 0035 | 16.5 | 10.2 | | 160 | 7.80 | 60 | 0.020 | 0.200K | 0.310 | 0.014 |
| | 10 | 30 0057 | 16.4 | 10.2 | | 160 | 7.80 | 60 | 0.020 | 0.200K | 0.310 | 0.015 |
| 73/08/16 | 14 | 20 0000 | 27.3 | | 36 | 151 | 8.50 | 53 | 0.070 | 0.800 | 0.060 | 0.012 |
| | 14 | 20 0005 | 24.8 | 9.8 | | 144 | 8.20 | 52 | 0.060 | 0.800 | 0.090 | 0.014 |
| | 14 | 20 0020 | 22.2 | 7.2 | | 138 | 7.50 | 52 | 0.100 | 0.600 | 0.300 | 0.021 |
| | 14 | 20 0040 | 21.8 | 7.0 | | 137 | 7.30 | 53 | 0.110 | 0.600 | 0.340 | 0.026 |
| | 14 | 20 0058 | 21.8 | 7.0 | | 136 | 7.20 | 53 | 0.100 | 0.600 | 0.340 | 0.023 |
| 73/10/22 | 15 | 00 0000 | 19.7 | | 39 | 128 | 7.60 | 47 | 0.050 | 0.300 | 0.220 | 0.017 |
| | 15 | 00 0005 | 19.7 | 7.2 | | 128 | 7.50 | 47 | 0.050 | 0.200K | 0.210 | 0.014 |
| | 15 | 00 0015 | 19.7 | 7.6 | | 128 | 7.50 | 47 | 0.060 | 0.200 | 0.210 | 0.022 |
| | 15 | 00 0030 | 19.7 | 7.4 | | 129 | 7.40 | 46 | 0.050 | 0.200 | 0.220 | 0.018 |
| | 15 | 00 0052 | 19.7 | 7.2 | | 123 | 7.30 | 46 | 0.050 | 0.200K | 0.220 | 0.021 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/22 | 10 | 30 0000 | 0.056 | 5.9 |
| | 10 | 30 0004 | 0.046 | |
| | 10 | 30 0015 | 0.050 | |
| | 10 | 30 0035 | 0.051 | |
| | 10 | 30 0057 | 0.054 | |
| 73/08/16 | 14 | 20 0000 | 0.054 | 8.4 |
| | 14 | 20 0005 | 0.061 | |
| | 14 | 20 0020 | 0.055 | |
| | 14 | 20 0040 | 0.082 | |
| | 14 | 20 0058 | 0.098 | |
| 73/10/22 | 15 | 00 0000 | 0.058 | 5.6 |
| | 15 | 00 0005 | 0.054 | |
| | 15 | 00 0015 | 0.063 | |
| | 15 | 00 0030 | 0.050 | |
| | 15 | 00 0052 | 0.085 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/10

472004
36 18 42.0 086 29 28.0 3
OLD HICKORY LAKE
47165 TENNESSEE

052091

11EPALES 2111202
0059 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/22 | 11 | 00 0000 | 16.5 | | 19 | 160 | 7.80 | 62 | 0.040 | 0.200 | 0.320 | 0.014 |
| | 11 | 00 0004 | 16.2 | 10.2 | | 160 | 7.80 | 51 | 0.040 | 0.200K | 0.320 | 0.014 |
| | 11 | 00 0015 | 15.9 | 10.2 | | 160 | 7.80 | 48 | 0.030 | 0.200K | 0.330 | 0.021 |
| | 11 | 00 0035 | 15.8 | 10.0 | | 155 | 7.80 | 48 | 0.030 | 0.200K | 0.330 | 0.020 |
| | 11 | 00 0058 | 15.8 | 10.0 | | 155 | 7.70 | 48 | 0.030 | 0.200K | 0.330 | 0.016 |
| 73/08/16 | 14 | 45 0000 | 27.1 | | 26 | 151 | 8.00 | 54 | 0.080 | 0.900 | 0.160 | 0.017 |
| | 14 | 45 0005 | 25.7 | 9.8 | | 149 | 7.60 | 54 | 0.060 | 0.400 | 0.180 | 0.022 |
| | 14 | 45 0015 | 22.9 | 6.2 | | 139 | 7.30 | 53 | 0.060 | 0.400 | 0.280 | 0.025 |
| | 14 | 45 0025 | 21.9 | 7.2 | | 136 | 7.10 | 55 | 0.080 | 0.300 | 0.320 | 0.029 |
| | 14 | 45 0040 | 21.8 | 7.2 | | 136 | 7.00 | 54 | 0.090 | 0.300 | 0.360 | 0.029 |
| | 14 | 45 0058 | 21.8 | 7.4 | | 136 | 7.10 | 54 | 0.100 | 0.300 | 0.360 | 0.028 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/22 | 11 | 00 0000 | 0.043 | 3.3 |
| | 11 | 00 0004 | 0.045 | |
| | 11 | 00 0015 | 0.040 | |
| | 11 | 00 0035 | 0.048 | |
| | 11 | 00 0058 | 0.054 | |
| 73/08/16 | 14 | 45 0000 | 0.083 | 12.7 |
| | 14 | 45 0005 | 0.083 | |
| | 14 | 45 0015 | 0.049 | |
| | 14 | 45 0025 | 0.054 | |
| | 14 | 45 0040 | 0.064 | |
| | 14 | 45 0058 | 0.124 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/10

472035
36 19 15.0 088 25 05.0 3
OLD HICKORY
47165 TENNESSEE

052091

11EPALES 2111202
0040 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/22 | 11 | 35 0000 | 17.1 | | 20 | 155 | 7.70 | 45 | 0.040 | 0.200 | 0.340 | 0.016 |
| | 11 | 35 0004 | 15.3 | 10.2 | | 160 | 7.70 | 45 | 0.040 | 0.200K | 0.340 | 0.016 |
| | 11 | 35 0015 | 15.2 | 10.0 | | 155 | 7.70 | 46 | 0.030 | 0.200K | 0.340 | 0.032 |
| | 11 | 35 0038 | 15.2 | 10.0 | | 155 | 7.70 | 45 | 0.030 | 0.200K | 0.350 | 0.026 |
| 73/08/16 | 15 | 15 0000 | 29.0 | | 30 | 160 | 7.00 | 55 | 0.090 | 0.400 | 0.360 | 0.021 |
| | 15 | 15 0005 | 25.0 | 8.8 | | 144 | 7.10 | 55 | 0.050 | 0.400 | 0.240 | 0.017 |
| | 15 | 15 0015 | 21.9 | 7.2 | | 138 | 7.00 | 56 | 0.060 | 0.300 | 0.330 | 0.020 |
| | 15 | 15 0030 | 21.9 | 7.2 | | 138 | 6.90 | 55 | 0.060 | 0.300 | 0.340 | 0.019 |
| | 15 | 15 0047 | 21.9 | 7.2 | | 137 | 6.90 | 56 | 0.060 | 0.300 | 0.340 | 0.019 |
| 73/10/22 | 15 | 34 0000 | 22.0 | | 36 | 133 | 7.50 | 46 | 0.050 | 0.400 | 0.240 | 0.019 |
| | 15 | 34 0005 | 19.7 | 7.6 | | 128 | 7.40 | 45 | 0.050 | 0.200K | 0.240 | 0.014 |
| | 15 | 34 0015 | 19.3 | 7.2 | | 127 | 7.20 | 45 | 0.050 | 0.200K | 0.240 | 0.014 |
| | 15 | 34 0025 | 19.3 | 7.8 | | 126 | 7.20 | 45 | 0.060 | 0.200K | 0.250 | 0.016 |
| | 15 | 34 0040 | 19.2 | 7.4 | | 127 | 7.20 | 47 | 0.060 | 0.200K | 0.250 | 0.016 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/22 | 11 | 35 0000 | 0.047 | 2.9 |
| | 11 | 35 0004 | 0.041 | |
| | 11 | 35 0015 | 0.045 | |
| | 11 | 35 0038 | 0.041 | |
| 73/08/16 | 15 | 15 0000 | 0.079 | 5.7 |
| | 15 | 15 0005 | 0.058 | |
| | 15 | 15 0015 | 0.049 | |
| | 15 | 15 0030 | 0.041 | |
| | 15 | 15 0047 | 0.074 | |
| 73/10/22 | 15 | 34 0000 | 0.066 | 2.2 |
| | 15 | 34 0005 | 0.052 | |
| | 15 | 34 0015 | 0.050 | |
| | 15 | 34 0025 | 0.055 | |
| | 15 | 34 0040 | 0.060 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/10

472301
36 09 15.0 086 36 05.0 3
J. PERCY PRIEST RESERVOIR
47037 TENNESSEE

052041

11EPALES 2111202
0071 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/21 | 09 15 | 0000 | 19.9 | | 78 | 280 | 8.50 | 121 | 0.040 | 0.500 | 0.070 | 0.002 |
| | 09 15 | 0004 | 19.9 | 10.4 | | 265 | 8.40 | 124 | 0.040 | 0.300 | 0.060 | 0.002K |
| | 09 15 | 0021 | 19.9 | 10.0 | | 260 | 8.40 | 124 | 0.040 | 0.300 | 0.060 | 0.002 |
| | 09 15 | 0035 | 18.6 | 11.0 | | 270 | 8.20 | 128 | 0.050 | 0.200 | 0.210 | 0.004 |
| | 09 15 | 0050 | 17.6 | 5.0 | | 270 | 7.90 | 126 | 0.100 | 0.300 | 0.350 | 0.023 |
| | 09 15 | 0068 | 15.8 | 1.8 | | 280 | 7.60 | 128 | 0.100 | 0.300 | 0.510 | 0.048 |
| 73/08/14 | 16 30 | 0000 | 28.9 | | 100 | 208 | 7.80 | 97 | 0.060 | 0.500 | 0.060 | 0.006 |
| | 16 30 | 0005 | 28.3 | 7.6 | | 210 | 7.70 | 96 | 0.050 | 0.400 | 0.050 | 0.015 |
| | 16 30 | 0020 | 27.2 | 2.2 | | 222 | 7.10 | 105 | 0.050 | 0.400 | 0.050 | 0.017 |
| | 16 30 | 0035 | 20.9 | 0.2 | | 238 | 7.00 | 126 | 0.070 | 0.400 | 0.040 | 0.026 |
| | 16 30 | 0050 | 18.7 | 0.0 | | 227 | 6.80 | 126 | 0.430 | 0.800 | 0.100 | 0.044 |
| | 16 30 | 0065 | 17.2 | 0.0 | | 248 | 6.70 | 146 | 1.110 | 1.600 | 0.060 | 0.026 |
| | 16 30 | 0075 | 16.2 | 0.2 | | 260 | 6.70 | 159 | 1.350 | 1.800 | 0.130 | 0.043 |
| 73/10/24 | 08 20 | 0000 | 21.0 | | 96 | 212 | 7.50 | 108 | 0.050 | 0.400 | 0.030 | 0.007 |
| | 08 20 | 0005 | 21.0 | | | 216 | 7.50 | 110 | 0.060 | 0.300 | 0.020 | 0.014 |
| | 08 20 | 0015 | 21.0 | 5.8 | | 216 | 7.70 | 110 | 0.050 | 0.200 | 0.020 | 0.013 |
| | 08 20 | 0025 | 21.0 | 5.8 | | 215 | 7.70 | 105 | 0.040 | 0.300 | 0.020 | 0.022 |
| | 08 20 | 0045 | 20.6 | 2.2 | | 227 | 7.30 | 132 | 0.690 | 1.100 | 0.020 | 0.036 |
| | 08 20 | 0055 | 19.0 | 0.0 | | 250 | 7.20 | 134 | 0.940 | 1.300 | 0.020 | 0.049 |
| | 08 20 | 0062 | 18.4 | 0.0 | | 254 | 7.20 | 138 | 1.240 | 1.600 | 0.020 | 0.037 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

-51-

STORET RETRIEVAL DATE 73/09/10

472301
36 09 15.0 086 36 05.0 3
JO PERCY PRIEST RESERVOIR
47037 TENNESSEE

052091

11EPALES 2111202
0071 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/21 | 09 15 | 0000 | 0.030 | 13.4 |
| | 09 15 | 0004 | 0.031 | |
| | 09 15 | 0021 | 0.031 | |
| | 09 15 | 0035 | 0.025 | |
| | 09 15 | 0050 | 0.060 | |
| | 09 15 | 0068 | 0.095 | |
| 73/08/16 | 16 30 | 0000 | 0.020 | 6.3 |
| | 16 30 | 0005 | 0.032 | |
| | 16 30 | 0020 | 0.044 | |
| | 16 30 | 0035 | 0.049 | |
| | 16 30 | 0050 | 0.115 | |
| | 16 30 | 0065 | 0.178 | |
| | 16 30 | 0075 | 0.194 | |
| 73/10/24 | 08 20 | 0000 | 0.018 | 3.8 |
| | 08 20 | 0005 | 0.023 | |
| | 08 20 | 0015 | 0.026 | |
| | 08 20 | 0025 | 0.030 | |
| | 08 20 | 0045 | 0.090 | |
| | 08 20 | 0055 | 0.102 | |
| | 08 20 | 0062 | 0.143 | |

STORET RETRIEVAL DATE 75/09/10

472302
36 07 24.0 085 36 31.0 3
J. PERCY PRIEST RESERVOIR
47037 TENNESSEE
052041

11EPALES 2111202
0065 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/21 | 10 20 | 0000 | 20.7 | | 74 | 265 | 8.50 | 121 | 0.040 | 0.500 | 0.050 | 0.005 |
| | 10 20 | 0004 | 20.7 | 11.6 | | 260 | 8.60 | 123 | 0.040 | 0.300 | 0.040 | 0.003 |
| | 10 20 | 0021 | 20.1 | 9.8 | | 270 | 8.40 | 125 | 0.030 | 0.300 | 0.050 | 0.005 |
| | 10 20 | 0035 | 18.2 | 6.6 | | 280 | 8.00 | 132 | 0.060 | 0.200 | 0.270 | 0.008 |
| | 10 20 | 0063 | 15.1 | 0.8 | | 300 | 7.70 | 138 | 0.300 | 0.600 | 0.360 | 0.065 |
| 73/08/16 | 17 00 | 0000 | 29.1 | | 98 | 210 | 7.80 | 95 | 0.080 | 0.600 | 0.050 | 0.009 |
| | 17 00 | 0005 | 29.0 | 8.4 | | 210 | 7.80 | 92 | 0.060 | 0.400 | 0.050 | 0.015 |
| | 17 00 | 0020 | 27.3 | 4.0 | | 217 | 7.30 | 116 | 0.050 | 0.400 | 0.050 | 0.015 |
| | 17 00 | 0030 | 22.4 | 0.4 | | 250 | 7.00 | 123 | 0.050 | 0.400 | 0.050 | 0.021 |
| | 17 00 | 0045 | 20.0 | 0.2 | | 231 | 6.90 | 129 | 0.300 | 0.500 | 0.060 | 0.030 |
| | 17 00 | 0060 | 17.7 | 0.2 | | 251 | 6.80 | 148 | 1.000 | 1.400 | 0.120 | 0.034 |
| 73/10/24 | 08 50 | 0000 | 21.0 | | 96 | 218 | 7.70 | 103 | 0.060 | 0.500 | 0.020 | 0.010 |
| | 08 50 | 0005 | 21.0 | 5.8 | | 218 | 7.70 | 109 | 0.050 | 0.300 | 0.020 | 0.014 |
| | 08 50 | 0015 | 21.0 | 6.0 | | 218 | 7.70 | 109 | 0.050 | 0.300 | 0.020 | 0.016 |
| | 08 50 | 0035 | 21.0 | 5.6 | | 222 | 7.30 | 111 | 0.170 | 0.300 | 0.020 | 0.019 |
| | 08 50 | 0048 | 19.3 | 0.1 | | 270 | 7.20 | 151 | 1.260 | 1.600 | 0.040 | 0.029 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/21 | 10 20 | 0000 | 0.028 | 13.3 |
| | 10 20 | 0004 | 0.044 | |
| | 10 20 | 0021 | 0.029 | |
| | 10 20 | 0035 | 0.031 | |
| | 10 20 | 0063 | 0.150 | |
| 73/08/16 | 17 00 | 0000 | 0.026 | 5.5 |
| | 17 00 | 0005 | 0.030 | |
| | 17 00 | 0020 | 0.056 | |
| | 17 00 | 0030 | 0.054 | |
| | 17 00 | 0045 | 0.081 | |
| | 17 00 | 0060 | 0.171 | |
| 73/10/24 | 08 50 | 0000 | 0.023 | 3.7 |
| | 08 50 | 0005 | 0.024 | |
| | 08 50 | 0015 | 0.025 | |
| | 08 50 | 0035 | 0.033 | |
| | 08 50 | 0048 | 0.084 | |

STORET RETRIEVAL DATE 76/09/10

472303
36 0. 25.0 086 33 15.0 3
J. PERCY PRIEST RESERVOIR
47037 TENNESSEE

052091

11EPALES 2111202
0049 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/21 | 11 11 | 0000 | 21.1 | | 54 | 293 | 8.50 | 138 | 0.040 | 0.600 | 0.050 | 0.008 |
| | 11 11 | 0004 | 21.0 | 10.2 | | 290 | 8.50 | 141 | 0.040 | 0.300 | 0.040 | 0.005 |
| | 11 11 | 0015 | 20.6 | 9.6 | | 290 | 8.50 | 141 | 0.030 | 0.300 | 0.050 | 0.007 |
| | 11 11 | 0025 | 19.5 | 6.2 | | 300 | 7.90 | 139 | 0.110 | 0.200 | 0.170 | 0.028 |
| | 11 11 | 0047 | 17.2 | 2.2 | | 300 | 7.60 | 146 | 0.210 | 0.300 | 0.330 | 0.061 |
| 73/08/17 | 10 05 | 0000 | 28.0 | | 108 | 213 | 8.30 | 99 | 0.100 | 1.200 | 0.070 | 0.008 |
| | 10 05 | 0005 | 27.8 | 9.7 | | 220 | 8.30 | 101 | 0.060 | 0.600 | 0.060 | 0.022 |
| | 10 05 | 0020 | 26.0 | 2.6 | | 241 | 7.90 | 106 | 0.120 | 0.600 | 0.070 | 0.044 |
| | 10 05 | 0035 | 21.4 | 0.0 | | 294 | 7.50 | 156 | 0.600 | 1.500 | 0.090 | 0.020 |
| | 10 05 | 0050 | 18.8 | 0.0 | | 265 | 7.30 | 162 | 1.220 | 2.000 | 0.090 | 0.017 |
| | 10 05 | 0075 | 16.9 | 0.0 | | 312 | 7.20 | 191 | 1.700 | 3.000 | 0.130 | 0.021 |
| 73/10/24 | 09 10 | 0000 | 20.5 | | 84 | 222 | 7.90 | 114 | 0.060 | 0.500 | 0.030 | 0.009 |
| | 09 10 | 0005 | 20.4 | 6.8 | | 221 | 7.80 | 116 | 0.060 | 0.300 | 0.030 | 0.018 |
| | 09 10 | 0015 | 20.5 | 6.6 | | 222 | 7.70 | 115 | 0.060 | 0.300 | 0.030 | 0.021 |
| | 09 10 | 0030 | 20.4 | 5.0 | | 226 | 7.60 | 119 | 0.100 | 0.300 | 0.030 | 0.030 |
| | 09 10 | 0050 | 19.7 | 0.0 | | 287 | 7.30 | 149 | 0.800 | 1.300 | 0.030 | 0.028 |
| | 09 10 | 0068 | 17.5 | 0.0 | | 365 | 7.10 | 208 | 1.140 | 3.300 | 0.020 | 0.021 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/21 | 11 11 | 0000 | 0.041 | 13.5 |
| | 11 11 | 0004 | 0.035 | |
| | 11 11 | 0015 | 0.033 | |
| | 11 11 | 0025 | 0.054 | |
| | 11 11 | 0047 | 0.099 | |
| 73/08/17 | 10 05 | 0000 | 0.026 | 5.7 |
| | 10 05 | 0005 | 0.035 | |
| | 10 05 | 0020 | 0.075 | |
| | 10 05 | 0035 | 0.258 | |
| | 10 05 | 0050 | 0.367 | |
| | 10 05 | 0075 | 0.383 | |
| 73/10/24 | 09 10 | 0000 | 0.029 | 6.7 |
| | 09 10 | 0005 | 0.035 | |
| | 09 10 | 0015 | 0.044 | |
| | 09 10 | 0030 | 0.047 | |
| | 09 10 | 0050 | 0.176 | |
| | 09 10 | 0068 | 0.666 | |

STORET RETRIEVAL DATE 73/04/10

-72304
36 03 31.0 086 30 20.0 3
J. PERCY PRIEST RESERVOIR
-7149 TENNESSEE

052091

11EPALES 2111202
0028 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/21 | 13 20 | 0000 | 21.4 | | 37 | 290 | 8.50 | 141 | 0.040 | 0.600 | 0.040 | 0.01 |
| | 13 20 | 0004 | 21.0 | 8.6 | | 295 | 8.20 | 139 | 0.040 | 0.300 | 0.030 | 0.01 |
| | 13 20 | 0015 | 20.1 | 5.4 | | 300 | 7.90 | 147 | 0.110 | 0.300 | 0.130 | 0.03 |
| | 13 20 | 0025 | 18.8 | 3.6 | | 340 | 7.60 | 160 | 0.170 | 0.400 | 0.270 | 0.04 |
| 73/08/17 | 10 30 | 0000 | 27.5 | | 66 | 229 | 8.00 | 108 | 0.100 | 0.900 | 0.080 | 0.01 |
| | 10 30 | 0005 | 27.5 | 6.0 | | 231 | 8.10 | 107 | 0.080 | 0.800 | 0.070 | 0.02 |
| | 10 30 | 0015 | 27.1 | 2.0 | | 245 | 7.70 | 116 | 0.130 | 0.800 | 0.100 | 0.04 |
| | 10 30 | 0025 | 24.4 | 0.1 | | 316 | 7.40 | 159 | 0.350 | 1.000 | 0.270 | 0.06 |
| | 10 30 | 0040 | 21.0 | 0.1 | | 313 | 7.30 | 172 | 0.560 | 1.400 | 0.160 | 0.03 |
| | 10 30 | 0056 | 19.2 | 0.2 | | 344 | 7.20 | 199 | 1.600 | 3.200 | 0.080 | 0.03 |
| 73/10/24 | 09 40 | 0000 | 20.1 | | 50 | 233 | 7.90 | 123 | 0.050 | 0.700 | 0.030 | 0.01 |
| | 09 40 | 0005 | 20.1 | 8.0 | | 233 | 7.90 | 121 | 0.040 | 0.400 | 0.030 | 0.01 |
| | 09 40 | 0015 | 20.0 | 6.8 | | 235 | 7.80 | 121 | 0.040 | 0.500 | 0.020 | 0.01 |
| | 09 40 | 0026 | 19.5 | 4.3 | | 247 | 7.60 | 130 | 0.150 | 0.500 | 0.030 | 0.02 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/21 | 13 20 | 0000 | 0.046 | 12.9 |
| | 13 20 | 0004 | 0.056 | |
| | 13 20 | 0015 | 0.067 | |
| | 13 20 | 0025 | 0.093 | |
| 73/08/17 | 10 30 | 0000 | 0.054 | 9.0 |
| | 10 30 | 0005 | 0.046 | |
| | 10 30 | 0015 | 0.101 | |
| | 10 30 | 0025 | 0.164 | |
| | 10 30 | 0040 | 0.174 | |
| | 10 30 | 0056 | 0.500 | |
| 73/10/24 | 09 40 | 0000 | 0.054 | 13.6 |
| | 09 40 | 0005 | 0.049 | |
| | 09 40 | 0015 | 0.051 | |
| | 09 40 | 0026 | 0.069 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 73/09/10

472305
36 01 45.0 086 27 22.0 3
J. PERCY PRIEST RESERVOIR
47149 TENNESSEE

05 2091

11EPALES 2111202
0043 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/05/21 | 13 45 | 0000 | 21.0 | | 34 | 300 | 8.60 | 146 | 0.030 | 0.800 | 0.040 | 0.011 |
| | 13 45 | 0004 | 21.0 | 9.0 | | 300 | 8.40 | 146 | 0.040 | 0.500 | 0.040 | 0.010 |
| | 13 45 | 0015 | 19.8 | 6.4 | | 350 | 7.60 | 158 | 0.090 | 0.400 | 0.360 | 0.040 |
| | 13 45 | 0025 | 18.3 | 3.4 | | 340 | 7.50 | 167 | 0.160 | 0.400 | 0.520 | 0.056 |
| | 13 45 | 0030 | 17.6 | | | | | | | | | |
| | 13 45 | 0035 | 17.2 | 5.0 | | 340 | 7.60 | 160 | 0.100 | 0.400 | 0.370 | 0.044 |
| | 13 45 | 0040 | 16.4 | 6.0 | | 330 | 7.40 | 159 | 0.080 | 0.500 | 0.400 | 0.043 |
| 73/08/17 | 11 05 | 0000 | 28.0 | | 36 | 244 | 8.30 | 113 | 0.110 | 1.100 | 0.110 | 0.009 |
| | 11 05 | 0005 | 27.0 | 10.6 | | 249 | 8.00 | 115 | 0.080 | 0.800 | 0.080 | 0.024 |
| | 11 05 | 0015 | 26.4 | 1.1 | | 273 | 7.70 | 127 | 0.060 | 0.400 | 0.150 | 0.068 |
| | 11 05 | 0025 | 24.1 | 3.2 | | 292 | 7.50 | 137 | 0.200 | 0.700 | 0.490 | 0.193 |
| | 11 05 | 0040 | 21.0 | 1.0 | | 302 | 7.40 | 164 | 0.280 | 1.000 | 0.270 | 0.052 |
| 73/10/24 | 10 05 | 0000 | 19.3 | | 36 | 261 | 8.00 | 135 | 0.040 | 0.500 | 0.030 | 0.037 |
| | 10 05 | 0005 | 19.1 | 7.4 | | 256 | 8.00 | 133 | 0.040 | 0.500 | 0.030 | 0.036 |
| | 10 05 | 0015 | 19.0 | 8.0 | | 251 | 8.10 | 132 | 0.030 | 0.500 | 0.020 | 0.028 |
| | 10 05 | 0027 | 18.8 | 8.0 | | 254 | 8.10 | 132 | 0.040 | 0.500 | 0.020 | 0.029 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/05/21 | 13 45 | 0000 | 0.052 | 22.7 |
| | 13 45 | 0004 | 0.056 | |
| | 13 45 | 0015 | 0.076 | |
| | 13 45 | 0025 | 0.088 | |
| | 13 45 | 0035 | 0.088 | |
| | 13 45 | 0040 | 0.112 | |
| 73/08/17 | 11 05 | 0000 | 0.083 | 10.2 |
| | 11 05 | 0005 | 0.073 | |
| | 11 05 | 0015 | 0.099 | |
| | 11 05 | 0025 | 0.255 | |
| | 11 05 | 0040 | 0.211 | |
| 73/10/24 | 10 05 | 0000 | 0.090 | 12.6 |
| | 10 05 | 0005 | 0.087 | |
| | 10 05 | 0015 | 0.080 | |
| | 10 05 | 0027 | 0.090 | |

# APPENDIX D

## TRIBUTARY AND WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 76/09/09

4705A1
36 17 50.0 086 39 22.0 4
CUMBERLAND RIVER
47 7.5 GOODLETTSVIL
I/CHEATHAM RESERVOIR 052091
AT OR JUST BELO OLD HICKORY DAM
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 10 | 20 | 0.330 | 2.300 | 0.039 | 0.018 | 0.060 |
| 73/05/04 | 10 | 25 | 0.273 | 0.400 | 0.017 | 0.052 | 0.125 |
| 73/06/11 | 11 | 15 | 0.300 | 1.260 | 0.023 | 0.017 | 0.080 |
| 73/07/26 | 15 | 00 | 0.210 | 0.280 | 0.022 | 0.015 | 0.060 |
| 73/08/15 | 10 | 25 | 0.190 | 0.480 | 0.044 | 0.036 | 0.090 |
| 73/09/04 | 10 | 35 | 0.650 | 0.520 | 0.063 | 0.044 | 0.090 |
| 73/10/14 | 10 | 15 | 0.300 | 0.300 | 0.035 | 0.028 | 0.080 |
| 73/11/03 | 10 | 30 | 0.180 | 0.400 | 0.058 | 0.021 | 0.100 |
| 73/12/02 | 08 | 40 | 0.470 | 0.500 | 0.040 | 0.068 | 0.200 |
| 74/01/06 | 10 | 15 | 0.470 | 0.400 | 0.020 | 0.058 | 0.210 |
| 74/02/03 | 10 | 05 | 0.410 | 0.400 | 0.025 | 0.015 | 0.095 |
| 74/02/19 | 11 | 00 | 0.600 | 0.800 | 0.035 | 0.015 | 0.085 |
| 74/03/03 | 09 | 45 | 0.440 | 0.400 | 0.025 | 0.025 | 0.075 |

STORET RETRIEVAL DATE 74/09/09

470GA2
35 19 13.0 087 13 22.0 4
CUMBERLAND RIVER
47 7.5 CHEATHAM DAM
0/CHEATHAM RESERVOIR 0520?1
AT OR JUST BELO CHEATHAM DAM
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 13 50 | | 0.370 | 0.640 | 0.026 | 0.042 | 0.105 |
| 73/05/04 | 13 15 | | 0.390 | 1.470 | 0.105 | 0.176 | 0.650 |
| 73/06/11 | 13 30 | | 0.330 | 0.500 | 0.034 | 0.042 | 0.165 |
| 73/07/26 | 08 20 | | 0.260 | 0.380 | 0.046 | 0.064 | 0.200 |
| 73/08/15 | 13 10 | | 0.240 | 0.520 | 0.078 | 0.102 | 0.180 |
| 73/09/08 | 13 40 | | 0.280 | 0.580 | 0.110 | 0.076 | 0.145 |
| 73/10/14 | 12 05 | | 0.280 | 0.550 | 0.105 | 0.071 | 0.150 |
| 73/11/03 | 13 20 | | 0.250 | 0.400 | 0.096 | 0.056 | 0.160 |
| 73/12/02 | 10 30 | | 0.460 | 1.200 | 0.064 | 0.084 | 0.360 |
| 74/01/06 | 12 40 | | 0.520 | 0.300 | 0.040 | 0.092 | 0.270 |
| 74/02/03 | 12 15 | | 0.460 | 0.200 | 0.020 | 0.045 | 0.260 |
| 74/02/19 | 13 45 | | 0.310 | 0.200 | 0.030 | 0.070 | 0.150 |
| 74/03/03 | 11 45 | | 0.460 | 0.300 | 0.035 | 0.050 | 0.115 |

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STORET RETRIEVAL DATE 74/09/09

470681
36 16 58.0 087 19 31.0 4
JOHNSON CREEK
47 7.5 CHEATHAM DAM
T/CHEATHAM RES 052091
BOOKER RD BRDG 2 MI SE OF COALING
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 13 35 | | 0.105 | 1.260 | 0.009 | 0.005K | 0.010 |
| 73/05/04 | 12 50 | | 0.210 | 0.900 | 0.023 | 0.010 | 0.020 |
| 73/06/11 | 13 15 | | 0.120 | 0.750 | 0.023 | 0.009 | 0.020 |
| 73/07/24 | 08 05 | | 0.290 | 0.310 | 0.021 | 0.011 | 0.020 |
| 73/09/15 | 12 55 | | 0.200 | 0.360 | 0.016 | 0.020 | 0.022 |
| 73/09/08 | 13 25 | | 0.126 | 0.300 | 0.019 | 0.006 | 0.015 |
| 73/10/14 | 11 55 | | 0.044 | 0.200 | 0.017 | 0.012 | 0.012 |
| 73/11/03 | 12 05 | | 0.024 | 0.350 | 0.016 | 0.005 | 0.040 |
| 73/12/02 | 10 20 | | 0.588 | 0.400 | 0.068 | 0.016 | 0.030 |
| 74/01/06 | 12 30 | | 0.500 | 0.100K | 0.012 | | 0.010 |
| 74/02/03 | 12 00 | | 0.330 | 0.100K | 0.010 | 0.005K | 0.005K |
| 74/02/19 | 13 30 | | 2.200 | 0.300 | 0.032 | 0.010 | 0.040 |
| 74/03/03 | 11 30 | | 0.120 | 0.200 | 0.015 | 0.010 | 0.010 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

4706C1
36 11 32.0 087 10 00.0 4
HARPETH RIVER
47 DICKSON CO TN MA
T/CHEATHAM RES 052091
RD 6149 BRDG 1 MI N OF HARPETH VALLEY
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 14 40 | | 0.550 | 0.480 | 0.005K | 0.154 | 0.200 |
| 73/05/04 | 14 00 | | 0.340 | 1.540 | 0.024 | 0.290 | 1.350 |
| 73/06/11 | 14 15 | | 0.690 | 0.400 | 0.027 | 0.210 | 0.430 |
| 73/07/24 | 07 20 | | 0.399 | 0.500 | 0.016 | 0.180 | 0.420 |
| 73/08/15 | 13 50 | | 0.680 | 0.440 | 0.025 | 0.430 | 0.980 |
| 73/09/08 | 14 20 | | 0.010K | 0.540 | 0.010 | 0.210 | 0.350 |
| 73/10/14 | 13 55 | | 0.039 | 0.350 | 0.010 | 0.220 | 0.360 |
| 73/11/03 | 14 10 | | 0.017 | 0.200 | 0.009 | | 0.260 |
| 73/12/02 | 11 18 | | 1.300 | 0.200 | 0.020 | 0.260 | 0.440 |
| 74/01/06 | 13 25 | | 1.040 | 0.400 | 0.008 | 0.208 | 0.440 |
| 74/02/03 | 13 00 | | 0.528 | 1.300 | 0.015 | 0.240 | |
| 74/02/19 | 14 30 | | 2.300 | 0.300 | 0.030 | 0.020 | 0.300 |
| 74/03/03 | 12 30 | | 0.670 | 0.200 | 0.015 | 0.165 | 0.230 |

19

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/04

470601
36 07 55.0 086 55 25.0 4
OVERALL CREEK
47 DAVIDSON CO MAP
T/CHEATHAM RES 052091
SEC RD BRDG .3 MI E OF GOWER
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 15 45 | | 0.168 | 0.440 | 0.038 | 0.089 | 0.200 |
| 73/05/04 | 15 00 | | 0.340 | 0.810 | 0.052 | 0.093 | 0.200 |
| 73/06/11 | 15 15 | | 0.056 | 0.840 | 0.066 | 0.056 | 0.198 |
| 73/07/26 | 10 25 | | 0.240 | 1.000 | 0.032 | 0.220 | 0.640 |
| 73/08/15 | 14 30 | | 0.294 | 0.300 | 0.069 | 0.210 | 0.470 |
| 73/09/06 | 15 10 | | 0.115 | 1.150 | 0.105 | 0.068 | 0.345 |
| 73/10/14 | 14 30 | | 0.075 | 0.650 | 0.081 | 0.115 | 0.345 |
| 73/11/03 | 14 50 | | 0.134 | 0.650 | 0.076 | | 0.500 |
| 73/12/02 | 11 50 | | 0.620 | 0.800 | 0.068 | 0.252 | 0.440 |
| 74/01/06 | 14 10 | | 0.750 | 0.500 | 0.068 | 0.156 | 0.330 |
| 74/02/03 | 13 40 | | 0.480 | 0.600 | 0.070 | 0.185 | 0.660 |
| 74/02/19 | 15 30 | | 2.640 | 0.900 | 0.030 | 0.110 | 0.525 |
| 74/03/03 | 13 15 | | 0.650 | 0.700 | 0.110 | 0.110 | 0.190 |

470661
36 09 05.0 086 51 15.0 4
RICHLAND CREEK
47 7.5 W NASHVILLE
T/CHEATHAM PES 052091
MAY 24 BRDG NEAR USGS GAGING STATION
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 16 00 | | 0.260 | 0.150 | 0.007 | 0.150 | 0.175 |
| 73/05/04 | 13 15 | | 0.890 | 0.280 | 0.008 | 0.252 | 0.295 |
| 73/06/11 | 15 25 | | 0.530 | 0.630 | 0.024 | 0.240 | 0.380 |
| 73/07/26 | 10 40 | | 0.820 | 0.500 | 0.021 | 0.400 | 0.720 |
| 73/08/15 | 14 40 | | 1.420 | 0.420 | 0.018 | 0.350 | 0.390 |
| 73/09/08 | 15 25 | | 0.360 | 0.520 | 0.048 | 0.231 | 0.313 |
| 73/10/14 | 14 45 | | 0.190 | 0.450 | 0.019 | 0.240 | 0.520 |
| 73/11/03 | 15 10 | | 0.510 | 0.250 | 0.030 | 0.228 | 0.315 |
| 73/12/02 | 12 00 | | 2.000 | 0.500 | 0.038 | 0.300 | 0.330 |
| 74/01/06 | 14 30 | | 1.800 | 0.400 | 0.024 | 0.276 | 0.390 |
| 74/02/03 | 14 00 | | 1.260 | 0.200 | 0.015 | 0.270 | 0.330 |
| 74/02/19 | 15 40 | | 0.276 | 0.400 | 0.015 | | 0.450 |
| 74/03/03 | 13 30 | | 0.910 | 0.300 | 0.017 | 0.225 | 0.270 |

63

STORET RETRIEVAL DATE 74/09/09

4706F1
36 09 15.0 086 07 02.0 4
BROWNS CREE
47 7.5 E NASHVILLE
T/CHEATHAM RES 052091
HWY 24 US HWY 70 BRDG NEAR CALVARY CEMET
11EPALES 21112VH
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 08 45 | | 1.900 | 1.320 | 0.460 | 0.120 | 0.315 |
| 73/05/04 | 09 15 | | 2.200 | 0.670 | 0.313 | 0.132 | 0.450 |
| 73/06/11 | 10 00 | | 1.540 | 2.300 | 0.560 | 0.690 | 1.350 |
| 73/07/26 | 13 25 | | 1.500 | 1.730 | 0.080 | 0.315 | 1.030 |
| 73/08/15 | 09 20 | | 2.300 | 0.835 | 0.470 | 0.360 | 0.575 |
| 73/09/06 | 09 35 | | 0.770 | 1.760 | 0.705 | 0.160 | 0.740 |
| 73/10/14 | 09 15 | | 0.810 | 1.000 | 0.300 | 0.220 | 0.455 |
| 73/11/03 | 09 30 | | 2.500 | 0.950 | 0.430 | 0.220 | 0.460 |
| 73/12/01 | 09 15 | | 2.700 | 1.400 | 0.280 | 0.240 | 0.840 |
| 74/01/06 | 09 00 | | 2.800 | 0.700 | 0.168 | 0.240 | 0.480 |
| 74/02/03 | 11 30 | | 0.900 | 1.100 | 0.270 | 0.270 | |
| 74/02/19 | 10 00 | | 0.330 | 1.000 | 0.020 | | 0.680 |
| 74/03/03 | 09 00 | | 1.680 | 1.800 | 0.500 | 0.135 | 0.250 |

470691
36 09 50.0 086 41 56.0 4
MILL CREEK
47 7.5 E NASHVILLE
T/CHEATHAM RES 052091
HWY 24 US HWY 70 BRDG .5 MI N MUDTAVERN
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 09 05 | | 0.520 | 2.400 | 0.051 | 0.220 | 0.330 |
| 73/05/04 | 09 25 | | 0.670 | 1.470 | 0.072 | 0.260 | 0.430 |
| 73/06/11 | 10 05 | | 0.650 | 1.380 | 0.024 | 0.300 | 0.400 |
| 73/07/26 | 13 40 | | 0.630 | 0.930 | 0.017 | 0.515 | 1.150 |
| 73/08/15 | 09 30 | | 1.020 | 0.660 | 0.058 | 0.490 | 1.400 |
| 73/09/04 | 09 45 | | 0.390 | 1.000 | 0.105 | 0.360 | 0.900 |
| 73/10/14 | 09 25 | | 0.820 | 0.650 | 0.058 | 0.550 | 1.250 |
| 73/11/03 | 09 40 | | 0.600 | 0.850 | 0.310 | 0.500 | 0.680 |
| 73/12/01 | 09 25 | | 1.600 | 0.300 | 0.036 | 0.320 | 0.440 |
| 74/01/06 | 09 05 | | 1.360 | 0.400 | 0.028 | 0.300 | 0.440 |
| 74/02/02 | 11 15 | | 0.460 | 2.000 | 0.055 | 0.300 | |
| 74/02/19 | 10 08 | | 0.580 | 0.400 | 0.045 | | 0.680 |
| 74/03/03 | 09 05 | | 0.680 | 0.400 | 0.025 | 0.260 | 0.440 |

-25-

STORET RETRIEVAL DATE 76/09/09

4706M1
36 11 14.0 086 38 00.0 4
STONES RIVE
47 7.5 E NASHVILLE
T/CHEATHAM RES 052091
May 24 US Hwy 70 BRDG SW OF HERMITAGE MI
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 09 25 | | 0.440 | 3.100 | 0.105 | 0.062 | 0.100 |
| 73/05/04 | 09 40 | | 0.420 | 1.500 | 0.065 | 0.046 | 0.080 |
| 73/06/11 | 10 20 | | 0.147 | 0.500 | 0.035 | 0.036 | 0.060 |
| 73/07/26 | 14 00 | | 0.580 | 0.980 | 0.008 | 0.360 | 0.510 |
| 73/08/15 | 09 45 | | 0.830 | 0.920 | 0.090 | 0.410 | 1.150 |
| 73/09/08 | 10 00 | | 0.430 | 2.100 | 0.273 | 1.040 | 1.500 |
| 73/10/14 | 09 35 | | 0.056 | 1.090 | 0.480 | 0.240 | 0.440 |
| 73/11/03 | 09 50 | | 0.026 | 0.550 | 0.210 | | 0.050 |
| 73/12/01 | 10 00 | | 0.148 | 0.500 | 0.096 | 0.024 | 0.070 |
| 74/01/06 | 09 35 | | 0.480 | 0.400 | 0.056 | 0.096 | 0.130 |
| 74/02/02 | 11 46 | | 0.600 | 0.950 | 0.065 | 0.125 | 0.200 |
| 74/02/19 | 10 20 | | 0.420 | 0.300 | 0.105 | | 0.110 |
| 74/03/03 | 09 15 | | 0.680 | 0.900 | 0.055 | 0.130 | 0.200 |

470631
36 18 41.0 086 40 22.0 4
MASKER CREEK
47 7.5 GUDDLETTSVIL
T/CHEATHAM RES 052031
US HWY 31 HWY 6 BRDG 1.5 MNS OF ROCKLAND
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 10 00 | | 0.078 | 2.425 | 0.062 | 0.066 | 0.200 |
| 73/05/04 | 10 10 | | 0.430 | 0.250 | 0.016 | 0.050 | 0.085 |
| 73/06/11 | 11 00 | | 0.300 | 0.480 | 0.029 | 0.077 | 0.210 |
| 73/07/26 | 14 45 | | 0.670 | 1.050 | 0.061 | 0.220 | |
| 73/08/15 | 10 10 | | 0.190 | 0.500 | 0.042 | 0.170 | 0.360 |
| 73/09/08 | 10 25 | | 0.072 | 0.810 | 0.021 | 0.150 | 0.275 |
| 73/10/14 | 10 08 | | 0.200 | | 0.630 | 0.260 | |
| 73/11/03 | 10 15 | | 0.231 | 0.350 | 0.039 | 0.194 | 0.315 |
| 73/12/02 | 08 30 | | 0.810 | 0.600 | 0.036 | 0.205 | 0.300 |
| 74/01/06 | | | 0.870 | 0.500 | 0.018 | 0.108 | 0.175 |
| 74/02/02 | 13 00 | | 0.430 | 0.600 | 0.020 | 0.065 | 0.120 |
| 74/02/19 | 10 50 | | 0.430 | 0.200 | 0.035 | 0.035 | 0.115 |
| 74/03/03 | 09 30 | | 0.330 | 0.400 | 0.020 | 0.065 | 0.150 |

STORET RETRIEVAL DATE 76/09/09

470BR1
36 12 15.0 086 51 10.0 4
HITES CRE
47 7.5 NASHVILLE
T/CHEATHAM RES 052091
MAY 12 BRDG 1 MI NW OF BORDEAUX
TENNALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 11 05 | | 0.240 | 1.150 | 0.026 | 0.147 | 0.180 |
| 73/05/04 | 11 00 | | 0.500 | 0.460 | 0.022 | 0.140 | 0.195 |
| 73/06/11 | 11 50 | | 0.630 | 0.390 | 0.016 | 0.220 | 0.315 |
| 73/07/25 | 10 00 | | 0.750 | 0.250 | 0.017 | 0.260 | 0.360 |
| 73/08/15 | 11 00 | | 0.660 | 0.540 | 0.029 | 0.420 | 0.610 |
| 73/09/04 | 12 00 | | 0.340 | 0.600 | 0.029 | 1.050 | 1.300 |
| 73/10/16 | 10 45 | | 2.100 | 0.600 | 0.052 | 2.900 | 3.450 |
| 73/11/03 | 11 20 | | 0.490 | 0.450 | 0.021 | 0.751 | 0.920 |
| 73/12/02 | 09 20 | | 1.680 | 0.500 | 0.072 | 0.288 | 0.330 |
| 74/01/06 | 10 40 | | 1.340 | 0.225 | 0.012 | 0.168 | 0.220 |
| 74/02/03 | 10 40 | | 0.640 | 0.300 | 0.020 | 0.180 | 0.310 |
| 74/02/19 | 12 00 | | 0.710 | 0.700 | 0.040 | 0.250 | 0.640 |
| 74/03/03 | 10 25 | | 0.588 | 0.400 | 0.035 | 0.230 | 0.300 |

...RET RETRIEVAL DATE 75/09/09

4706L1
36 14 30.0 087 01 30.0 4
RIG MORROW ONE CREEK
47 CHEATHAM CO MAP
T/CHEATHAM RES 052091
HWY 12 BRDG 1 MI NW OF MORROWBONE
11EPALES 211120-
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJFL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 11 30 | | 0.147 | 1.600 | 0.018 | 0.006 | 0.010 |
| 73/05/04 | 11 15 | | 0.120 | 0.265 | 0.008 | 0.008 | 0.015 |
| 73/06/11 | 12 05 | | 0.150 | 0.240 | 0.050 | 0.014 | 0.015 |
| 73/07/26 | 09 35 | | 0.330 | 0.370 | 0.029 | 0.023 | 0.040 |
| 73/08/15 | 11 15 | | 0.105 | 0.360 | 0.033 | 0.019 | 0.050 |
| 73/09/04 | 12 20 | | 0.079 | 0.500 | 0.005K | 0.012 | 0.035 |
| 73/10/14 | 11 00 | | 0.054 | 0.200 | 0.020 | | 0.025 |
| 73/11/03 | | | 0.048 | 0.200 | 0.012 | | 0.005K |
| 73/12/02 | 09 35 | | 0.600 | 0.500 | 0.048 | 0.016 | 0.017 |
| 74/01/06 | 11 00 | | 0.550 | 0.300 | 0.032 | 0.016 | 0.016 |
| 74/02/03 | 11 00 | | 0.294 | 0.600 | 0.020 | 0.005 | 0.020 |
| 74/02/19 | 12 20 | | 0.136 | 0.100 | 0.015 | 0.012 | 0.020 |
| 74/03/03 | 10 45 | | 0.136 | 0.600 | 0.010 | 0.005K | 0.005 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

47061
36 19 22.0 087 05 32.0 4
SYCAMORE CREEK
47 7.5 ASHLAND CITY
T/CHEATHAM RES 052091
RD 6150 HRDG .5 MI N OF BETHLEHEM CHURCH
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 12 30 | | 0.360 | 0.930 | 0.026 | 0.005K | 0.005K |
| 73/05/04 | 11 35 | | 0.520 | 0.270 | 0.008 | 0.010 | 0.025 |
| 73/06/11 | 12 35 | | 0.490 | 0.310 | 0.048 | 0.009 | 0.020 |
| 73/07/26 | 09 00 | | 0.430 | 0.260 | 0.023 | 0.019 | 0.050 |
| 73/08/15 | 11 40 | | 0.360 | 0.300 | 0.017 | 0.013 | 0.030 |
| 73/09/08 | 12 35 | | 0.200 | 1.320 | 0.007 | 0.011 | 0.025 |
| 73/10/14 | 11 15 | | 0.110 | 0.150 | | 0.009 | 0.020 |
| 73/11/03 | 12 20 | | 0.115 | 0.100K | 0.010 | | 0.035 |
| 73/12/02 | 09 50 | | 1.010 | 0.400 | 0.064 | 0.012 | 0.030 |
| 74/01/06 | 11 40 | | 0.950 | 0.300 | 0.020 | 0.016 | 0.016 |
| 74/02/03 | 11 15 | | 0.580 | 0.400 | 0.015 | 0.010 | |
| 74/02/19 | 12 40 | | 0.36H | 0.100 | 0.015 | 0.005 | 0.005 |
| 74/03/03 | 11 00 | | 0.480 | 0.700 | 0.015 | 0.015 | 0.015 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

4706N1
36 19 58.0 087 05 49.0 4
SPRING CREEK
47 7.5 ASHLAND CITY
T/CHEATHAM RES 052091
RD BRDG .6 MI SE OF LOCKERTSVILLE CHURCH
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/14 | 12 | 45 | 0.860 | 1.150 | 0.013 | 0.005K | 0.010 |
| 73/05/04 | 11 | 45 | 1.040 | 0.180 | 0.009 | 0.011 | 0.050 |
| 73/06/11 | 12 | 45 | 1.040 | 0.100K | 0.018 | 0.009 | 0.015 |
| 73/07/26 | 09 | 15 | 0.850 | 0.170 | 0.009 | 0.013 | 0.020 |
| 73/08/15 | 11 | 45 | 0.880 | 0.140 | 0.012 | 0.013 | 0.020 |
| 73/09/08 | 12 | 40 | 0.520 | 0.650 | 0.016 | 0.010 | 0.020 |
| 73/10/14 | 11 | 20 | 0.430 | 0.550 | 0.019 | 0.023 | 0.025 |
| 73/11/03 | 12 | 25 | 0.399 | 0.150 | 0.008 | 0.005 | 0.035 |
| 73/12/02 | 09 | 55 | 1.260 | 0.300 | 0.036 | 0.020 | 0.035 |
| 74/01/06 | 11 | 45 | 1.360 | 0.100 | 0.012 | 0.016 | 0.016 |
| 74/02/03 | 11 | 20 | 1.040 | 0.700 | 0.020 | 0.005K | 0.015 |
| 74/02/19 | 12 | 50 | 0.940 | 0.100K | 0.015 | 0.005 | 0.005 |
| 74/03/03 | 11 | 05 | 0.950 | 1.750 | 0.075 | 0.005 | 0.015 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

47J6AA AB4706AA P003170
36 16 15.0 087 04 26.0 4
ASHLAND CITY
47 7.5 ASHLAND CITY
T/CHEATHAM RESERVOIR 052091
CUMBERLAND RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/07/23 | 11 30 | | | | | | | | |
| CP(T)- | | | 12.600 | 1.400 | 0.950 | 12.800 | 13.500 | 0.500 | 0.500 |
| 73/07/23 | 15 00 | | | | | | | | |
| 73/08/27 | 09 30 | | | | | | | | |
| CP(T)- | | | | 4.950 | 2.060 | 19.000 | 21.000 | 0.400 | 0.400 |
| 73/08/27 | 15 30 | | | | | | | | |
| 73/10/22 | 09 45 | | | | | | | | |
| CP(T)- | | | 27.000 | 3.300 | 1.700 | 15.400 | 18.000 | 0.660 | 0.650 |
| 73/10/22 | 15 45 | | | | | | | | |
| 73/11/26 | 08 00 | | | | | | | | |
| CP(T)- | | | 5.500 | 15.500 | 0.120 | 5.100 | 9.000 | 0.472 | 0.500 |
| 73/11/26 | 16 00 | | | | | | | | |
| 73/12/24 | 08 00 | | | | | | | | |
| CP(T)- | | | 6.600 | 7.700 | 0.420 | 5.500 | 8.100 | 0.560 | 0.600 |
| 73/12/24 | 14 00 | | | | | | | | |
| 74/02/25 | 08 00 | | | | | | | | |
| CP(T)- | | | 5.520 | 8.200 | 0.300 | 3.120 | 5.600 | 0.500 | 0.500 |
| 74/02/25 | 16 00 | | | | | | | | |
| 74/04/08 | 08 30 | | | | | | | | |
| CP(T)- | | | 3.840 | 2.400 | 0.130 | 2.300 | 3.300 | 0.694 | 0.450 |
| 74/04/08 | 16 30 | | | | | | | | |
| 74/06/24 | 08 00 | | | | | | | | |
| CP(T)- | | | 7.100 | 2.900 | 0.230 | 7.200 | 8.500 | 0.200 | 0.300 |
| 74/06/24 | 16 00 | | | | | | | | |
| 74/07/31 | 09 00 | | | | | | | | |
| CP(T)- | | | 13.600 | 4.400 | 0.180 | 8.600 | 9.900 | 0.327 | 0.325 |
| 74/07/31 | 16 00 | | | | | | | | |
| 74/08/30 | 10 30 | | | | | | | | |
| CP(T)- | | | 0.080 | 14.000 | 0.050K | 0.089 | 9.900 | 0.545 | 0.300 |
| 74/08/30 | 16 30 | | | | | | | | |
| 74/09/30 | 08 00 | | | | | | | | |
| CP(T)- | | | 3.100 | 7.000 | 0.094 | 2.700 | 3.600 | 0.700 | 0.650 |
| 74/09/30 | 16 00 | | | | | | | | |
| 74/10/31 | 10 00 | | | | | | | | |
| CP(T)- | | | 9.000 | 7.300 | 0.354 | 6.880 | 7.700 | 0.400 | 0.400 |
| 74/10/31 | 14 00 | | | | | | | | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

[illegible] DATE 75/05/09

4706AA AS4706AA P003170
36 16 15.0 087 04 26.0 4
ASHLAND CITY
47 7.5 ASHLAND CITY
T/CHEATHAM RESERVOIR 052091
CUMBERLAND RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 74/11/28 | 10 00 | | | | | | | | |
| CP(T)- | | | | | | | | 0.400 | |
| 74/11/28 | 19 00 | | | | | | | | |

STORET RETRIEVAL DATE 76/09/09

4706AB A5470BAB P450000
36 11 10.0 086 47 15.0 4
NASHVILLE MAIN PLANT
47 7.5 NASHVILLE W
T/CREATHAM RESERVOIR 052091
CUMBERLAND RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/05/30 | 00 00 | | | | | | | | |
| CP(T)- | | | 1.370 | 8.100 | 0.870 | 2.500 | 3.800 | 58.900 | 57.000 |
| 73/05/30 | 24 00 | | | | | | | | |
| 73/06/01 | 00 00 | | | | | | | | |
| CP(T)- | | | 1.730 | 8.500 | 0.299 | 1.010 | 2.700 | 60.900 | 57.700 |
| 73/06/01 | 24 00 | | | | | | | | |
| 73/07/01 | 00 00 | | | | | | | | |
| CP(T)- | | | 5.200 | 8.600 | 0.350 | 2.850 | 3.700 | 55.300 | 52.000 |
| 73/07/01 | 24 00 | | | | | | | | |
| 73/08/01 | 00 00 | | | | | | | | |
| CP(T)- | | | 2.300 | 6.700 | 0.640 | 2.200 | 3.035 | 43.700 | 48.800 |
| 73/08/01 | 24 00 | | | | | | | | |
| 73/09/01 | 00 00 | | | | | | | | |
| CP(T)- | | | 2.900 | 11.000 | | 2.280 | 3.600 | 32.700 | 44.000 |
| 73/09/01 | 24 00 | | | | | | | | |
| 73/10/01 | 00 00 | | | | | | | | |
| CP(T)- | | | 4.100 | 12.500 | 0.840 | 3.700 | 4.700 | 45.800 | 36.600 |
| 73/10/01 | 24 00 | | | | | | | | |
| 73/11/05 | | | 1.680 | 9.150 | 0.082 | 2.940 | 3.900 | 48.400 | 40.400 |
| 73/12/11 | | | 3.120 | 9.900 | 0.084 | 2.600 | 4.100 | 35.000 | 48.400 |
| 74/01/01 | | | 1.560 | 5.600 | 0.150 | 1.480 | 2.200 | 27.000 | 31.700 |
| 74/01/31 | | | 1.280 | 5.800 | 0.180 | 2.640 | 3.300 | 32.000 | 28.000 |
| 74/02/28 | | | 1.400 | 7.400 | 0.150 | 0.750 | 1.700 | 54.200 | 55.300 |
| 74/03/31 | | | 2.800 | 1.700 | 0.067 | 1.850 | 2.200 | 52.600 | 55.700 |
| 74/05/01 | | | 0.800 | 12.250 | 0.580 | 1.250 | 1.650 | 50.100 | 53.000 |

RET RETRIEVAL DATE 74/09/09

4706AC AS4706AC P040440
36 17 22.0 086 41 20.0 4
NASHVILLE DRY CREEK PLANT
47 7.5 GOODLETTSVIL
T/CHEATHAM RESERVOIR 052091
CUMBERLAND RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/05/30 | 00 | 00 | | | | | | | |
| CP(T)- | | | 5.500 | 1.800 | 0.790 | 4.700 | 5.000 | 3.900 | 3.000 |
| 73/05/30 | 24 | 00 | | | | | | | |
| 73/06/01 | 00 | 00 | | | | | | | |
| CP(T)- | | | 6.360 | 2.600 | 0.269 | 6.530 | 7.200 | 4.200 | 3.000 |
| 73/06/01 | 24 | 00 | | | | | | | |
| 73/07/01 | 00 | 00 | | | | | | | |
| CP(T)- | | | 5.500 | 10.500 | 0.590 | 8.400 | 10.000 | 2.200 | 2.950 |
| 73/07/01 | 24 | 00 | | | | | | | |
| 73/08/01 | 00 | 00 | | | | | | | |
| CP(T)- | | | 9.100 | 3.600 | 0.700 | 3.450 | 9.890 | 2.700 | 2.450 |
| 73/08/01 | 24 | 00 | | | | | | | |
| 73/09/01 | 00 | 00 | | | | | | | |
| CP(T)- | | | 16.000 | 1.200 | 0.640 | 10.000 | 13.500 | 1.700 | 2.180 |
| 73/09/01 | 24 | 00 | | | | | | | |
| 73/10/01 | 00 | 00 | | | | | | | |
| CP(T)- | | | 16.400 | 5.500 | 0.310 | 11.850 | 12.020 | 2.200 | 2.100 |
| 73/10/01 | 24 | 00 | | | | | | | |
| 73/11/05 | 09 | 00 | 12.200 | 3.300 | 0.132 | 7.000 | 8.000 | 3.600 | 2.100 |
| 73/12/11 | | | 14.400 | 3.200 | 0.140 | 9.300 | 10.000 | 1.800 | 3.500 |
| 74/01/01 | | | 7.800 | 1.150 | 0.080 | 3.840 | 5.780 | 2.600 | 3.300 |
| 74/01/31 | | | 1.520 | 6.100 | 0.230 | 5.200 | 7.200 | 3.300 | 3.300 |
| 74/02/28 | | | 1.400 | 6.700 | 0.140 | 6.500 | 8.875 | 2.300 | 3.100 |
| 74/03/31 | | | 3.600 | 4.200 | 0.230 | 6.700 | 8.500 | 1.800 | 2.600 |
| 74/05/01 | | | 4.700 | 10.000 | 0.330 | 14.000 | 17.000 | 2.560 | 2.600 |

STORET RETRIEVAL DATE 76/09/09

4706AD AS4706AD P010591
36 15 18.0 086 39 25.0 4
OLD HICKOR
47 7.5 GOODLETTSVIL
D/CHEATHAM RESERVOIR 052091
CHEATHAM RESERVOIR
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/08/01 | 11 00 | | | | | | | | |
| CP(T)- | | | 7.800 | 3.900 | 1.900 | 5.800 | 6.600 | 0.780 | 0.690 |
| 73/08/01 | 16 00 | | | | | | | | |
| 73/09/06 | 11 00 | | | | | | | | |
| CP(T)- | | | 8.400 | 7.100 | 3.140 | 9.220 | | 0.714 | 0.910 |
| 73/09/06 | 15 00 | | | | | | | | |
| 73/10/17 | 10 00 | | | | | | | | |
| CP(T)- | | | 11.800 | 2.980 | 1.470 | 7.000 | 7.250 | 0.650 | 0.585 |
| 73/10/17 | 14 00 | | | | | | | | |
| 73/11/06 | 10 00 | | | | | | | | |
| CP(T)- | | | 9.300 | 0.715 | 0.210 | 5.000 | 5.400 | 0.736 | 0.631 |
| 73/11/06 | 14 00 | | | | | | | | |
| 73/12/17 | 10 00 | | | | | | | | |
| CP(T)- | | | 10.800 | 5.450 | 2.100 | 7.600 | 9.530 | 0.562 | 0.620 |
| 73/12/17 | 14 00 | | | | | | | | |
| 74/02/11 | 10 00 | | | | | | | | |
| CP(T)- | | | 8.800 | 3.000 | 1.250 | 6.650 | 7.600 | 0.980 | 0.793 |
| 74/02/11 | 14 00 | | | | | | | | |
| 74/03/15 | 10 00 | | | | | | | | |
| CP(T)- | | | 3.000 | 15.000 | 5.800 | 5.500 | 8.400 | 0.733 | 0.792 |
| 74/03/15 | 14 00 | | | | | | | | |
| 74/04/10 | | | 6.600 | 4.700 | 1.430 | 5.000 | 6.200 | 0.746 | 0.647 |
| 74/05/08 | 10 00 | | | | | | | | |
| CP(T)- | | | 12.600 | 8.200 | 3.700 | 7.800 | 8.800 | 0.644 | 0.760 |
| 74/05/08 | 15 00 | | | | | | | | |
| 74/06/12 | 10 00 | | | | | | | | |
| CP(T)- | | | 8.500 | 3.700 | 0.800 | 4.200 | 4.900 | 1.190 | 0.744 |
| 74/06/12 | 14 00 | | | | | | | | |
| 74/07/10 | 10 00 | | | | | | | | |
| CP(T)- | | | 10.900 | 4.700 | 1.400 | 7.700 | 8.400 | 0.684 | 0.900 |
| 74/07/10 | 14 00 | | | | | | | | |
| 74/08/12 | 10 00 | | 10.200 | 2.600 | 0.520 | 4.750 | 5.200 | 0.514 | 0.680 |
| 74/09/23 | 10 00 | | | | | | | | |
| CP(T)- | | | 14.410 | 4.700 | 0.624 | 6.820 | 7.950 | 0.460 | 0.587 |
| 74/09/23 | 14 00 | | | | | | | | |

NET RETRIEVAL DATE 76/09/09

-706KA TF4706KA P006923
36 14 00.0 086 48 37.0 4
PARKWOOD SERV. COMPANY
47 7.5 NASHVILLE W.
T/CHEATHAM 0520+1
EWING CREEK
11E-ALES 21+120+
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/06/11 | 00 | 00 | | | | | | | |
| CP(T)- | | | 5.200 | 5.600 | 0.059 | 6.500 | 7.100 | 0.613 | 0.675 |
| 73/06/11 | 24 | 00 | | | | | | | |
| 73/07/16 | 00 | 00 | | | | | | | |
| CP(T)- | | | 8.100 | 1.400 | 0.230 | 11.600 | 12.000 | 0.387 | 0.399 |
| 73/07/16 | 24 | 00 | | | | | | | |
| 73/08/22 | 12 | 00 | | | | | | | |
| CP(T)- | | | 4.900 | 1.600 | 0.040 | 12.900 | 14.000 | 0.301 | 0.370 |
| 73/08/23 | 12 | 00 | | | | | | | |
| 73/09/14 | 00 | 00 | | | | | | | |
| CP(T)- | | | 5.000 | 2.200 | 0.290 | 10.300 | 11.000 | 0.620 | 0.650 |
| 73/09/14 | 24 | 00 | | | | | | | |
| 73/10/09 | 00 | 00 | | | | | | | |
| CP(T)- | | | 11.600 | 2.600 | 0.230 | 14.350 | 14.650 | 0.344 | 0.346 |
| 73/10/09 | 24 | 00 | | | | | | | |
| 73/11/14 | 00 | 00 | | | | | | | |
| CP(T)- | | | 3.700 | 0.910 | 0.360 | 13.020 | 13.820 | 0.335 | 0.385 |
| 73/11/14 | 24 | 00 | | | | | | | |
| 74/01/24 | 00 | 00 | | | | | | | |
| CP(T)- | | | 2.640 | 1.500 | 0.240 | 4.900 | 5.250 | 0.600 | 0.550 |
| 74/01/24 | 24 | 00 | | | | | | | |
| 74/02/20 | | | 1.840 | 5.500 | 0.120 | 6.000 | 7.250 | 0.692 | 0.508 |
| 74/04/09 | 00 | 00 | | | | | | | |
| CP(T)- | | | 1.920 | 4.900 | 0.050K | 4.000 | 5.900 | 0.650 | 0.600 |
| 74/04/09 | 24 | 00 | | | | | | | |
| 74/05/20 | 00 | 00 | | | | | | | |
| CP(T)- | | | 4.000 | 9.200 | 0.290 | 11.500 | 13.000 | 0.355 | 0.400 |
| 74/05/20 | 24 | 00 | | | | | | | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

470BYA TF470BYA P006000
36 10 00.0 086 36 15.0 4
NASHVILLE/CUMBERLAND #1
47 7.5 NASHVILLE E
T/CHEATHAM RESERVOIR 052091
STONERS CREEK/STONERS RIVER
11EPALES 214120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/08/14 | 10 00 | | 1.780 | 5.100 | 0.050 | 3.360 | 3.400 | 0.550 | 0.591 |
| 73/09/14 | 08 00 | | 6.600 | 4.400 | 0.399 | 10.100 | 11.000 | 0.570 | 0.500 |
| 73/12/03 | 14 00 | | 1.200 | 13.000 | 2.400 | 10.200 | 14.000 | 0.600 | 0.550 |
| 73/12/31 | 14 00 | | 1.500 | 23.000 | 2.310 | 9.900 | 11.300 | 0.550 | 0.688 |
| 74/02/04 | | | 0.800 | 15.000 | 1.600 | 7.040 | 8.600 | 0.750 | 0.600 |
| 74/03/04 | 15 15 | | 0.120 | 27.000 | 11.000 | 15.700 | 19.500 | 0.508 | 0.599 |
| 74/04/02 | 15 15 | | 0.320 | 14.000 | 2.100 | 6.000 | 9.100 | 0.208 | 0.192 |
| 74/05/01 | 13 30 | | 0.080 | 22.000 | 9.900 | 12.500 | 14.500 | 0.581 | 0.634 |
| 74/06/05 | 14 10 | | 0.880 | 19.000 | 5.900 | 7.900 | 9.700 | 0.722 | 0.571 |
| 74/07/07 | 13 30 | | 0.920 | 37.000 | 15.000 | 12.000 | 16.500 | 0.650 | 0.595 |
| 74/08/06 | 16 00 | | 4.400 | 23.000 | 7.700 | 10.000 | 14.000 | 0.552 | 0.501 |
| 74/09/03 | 13 20 | | 5.280 | 4.000 | 0.330 | 2.400 | 3.400 | 0.700 | 0.640 |

RET RETRIEVAL DATE 74/09/09

470eYm TF4706Ym P002150
36 09 50.0 086 37 15.0 4
NASHVILLE/CUMBERLAND #2
47 7.5 NASHVILLE E
T/CHEATHAM RESERVOIR 052091
STONERS CREEK/STONERS RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/08/14 | 08 30 | | 2.040 | 5.100 | 0.126 | 4.620 | 11.600 | 0.149 | 0.160 |
| 73/09/14 | 10 00 | | 7.900 | 3.400 | 0.357 | 10.200 | 11.000 | 0.120 | 0.110 |
| 73/12/03 | 14 30 | | 10.000 | 4.900 | 0.220 | 8.400 | 13.800 | 0.150 | 0.100 |
| 73/12/31 | 15 05 | | 2.800 | 14.000 | 0.100 | 5.700 | 7.600 | 0.140 | 0.145 |
| 74/02/04 | | | 0.600 | 8.600 | 0.460 | 4.100 | 5.100 | 0.200 | 0.150 |
| 74/03/04 | 15 00 | | 0.120 | 28.000 | 11.000 | 18.800 | 18.900 | 0.178 | 0.182 |
| 74/04/02 | 14 45 | | 0.240 | 14.000 | 2.100 | 6.300 | 9.100 | 0.225 | 0.160 |
| 74/05/01 | 14 00 | | 4.600 | 7.500 | 1.150 | 9.750 | 11.500 | 0.134 | 0.138 |
| 74/06/05 | 14 30 | | 0.960 | 19.000 | 5.000 | 7.900 | 9.600 | 0.145 | 0.128 |
| 74/07/07 | 13 45 | | 0.640 | 25.000 | 10.800 | 8.300 | 10.000 | 0.129 | 0.132 |
| 74/08/06 | 15 30 | | 2.760 | 12.000 | 2.800 | 5.700 | 7.400 | 0.160 | 0.152 |
| 74/09/03 | | | 2.700 | | 0.140 | 1.100 | 1.300 | 0.227 | 0.146 |

STORET RETRIEVAL DATE 76/09/09

=720A1
36 14 50.0 085 57 20.0 4
CUMBERLAND RIVER
47 SMITH CO TN MAP
I/OLD HICKORY RES 0520?1
NO BMDS IN CARTHAGE CONNCTS MAY 24 & 25
11EPALES 211120=
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 14 | 15 | 0.290 | 0.945 | 0.094 | 0.006 | 0.020 |
| 73/05/12 | 14 | 30 | 0.315 | 0.300 | 0.017 | 0.016 | 0.060 |
| 73/06/09 | 12 | 35 | 0.252 | 2.100 | 0.050 | 0.013 | 0.030 |
| 73/07/01 | 14 | 50 | 0.390 | 0.340 | 0.039 | 0.050 | 0.110 |
| 73/07/25 | 12 | 45 | 0.378 | 0.140 | 0.011 | 0.026 | 0.045 |
| 73/09/02 | 16 | 30 | 0.294 | 0.600 | 0.052 | 0.005K | 0.050 |
| 73/10/06 | 13 | 05 | 0.198 | 1.600 | 0.260 | 0.010 | 0.110 |
| 73/11/04 | 11 | 45 | 0.240 | 1.080 | 0.115 | 0.009 | 0.040 |
| 73/12/14 | 11 | 07 | 0.240 | 0.300 | 0.016 | 0.012 | 0.030 |
| 74/01/09 | 10 | 30 | 0.352 | 0.300 | 0.012 | 0.032 | 0.140 |
| 74/02/03 | 13 | 00 | 0.390 | 0.800 | 0.125 | 0.030 | 0.145 |
| 74/02/17 | 12 | 00 | 0.780 | 0.300 | 0.015 | 0.010 | 0.070 |
| 74/03/04 | 13 | 30 | 0.352 | 0.200 | 0.015 | 0.010 | 0.060 |
| 74/03/25 | 13 | 00 | 0.344 | 0.200 | 0.040 | 0.005 | 0.040 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

472DA2
36 17 50.0 086 39 22.0 4
CUMBERLAND RIVER
47 7.5 GOODLETTSVIL
O/OLD HICKORY RES 052091
AT DH BELO OLD HICKORY DAM NEAR ROCKLAND
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 09 55 | | 0.315 | 0.190 | 0.005K | 0.019 | 0.060 |
| 73/05/12 | 09 35 | | 0.350 | 0.310 | 0.015 | 0.032 | 0.097 |
| 73/06/09 | 08 40 | | 0.520 | 1.890 | 0.081 | 0.028 | 0.095 |
| 73/07/01 | 14 55 | | 0.357 | 1.680 | 0.168 | 0.028 | 0.080 |
| 73/07/28 | 08 50 | | 0.290 | 0.620 | 0.005K | 0.018 | 0.065 |
| 73/09/07 | 13 05 | | 0.300 | 0.540 | 0.048 | 0.027 | 0.075 |
| 73/10/06 | 09 50 | | 0.147 | 1.350 | 0.168 | 0.030 | 0.105 |
| 73/11/04 | 08 35 | | 0.189 | 1.050 | 0.220 | 0.032 | 0.095 |
| 73/12/15 | 09 15 | | 0.440 | 0.900 | 0.080 | 0.032 | 0.070 |
| 74/01/09 | 15 00 | | 0.420 | 0.200 | 0.012 | 0.040 | 0.100 |
| 74/02/03 | 09 15 | | 0.480 | 0.150 | 0.020 | 0.020 | 0.145 |
| 74/02/17 | 08 35 | | 0.440 | 0.300 | 0.015 | 0.015 | 0.075 |
| 74/03/04 | 10 50 | | 0.400 | 0.375 | 0.020 | 0.020 | 0.075 |
| 74/03/25 | 09 15 | | 0.384 | 0.300 | 0.005 | 0.030 | 0.095 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/04/04

472081
36 13 54.0 086 30 22.0 4
CEDAR CREEK (WESTERN)
47 7.5 HERMITAGE
T/OLD HICKORY RES 052091
TN HWY 20/US HWY 70 BRDG 3 MI E GREEN HI
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 10 40 | | 0.010K | 0.180 | 0.011 | 0.027 | 0.040 |
| 73/05/12 | 10 30 | | 0.096 | 0.270 | 0.021 | 0.066 | 0.110 |
| 73/06/09 | 09 30 | | 0.190 | 1.760 | 0.042 | 0.100 | 0.135 |
| 73/07/01 | 09 35 | | 0.080 | 1.050 | 0.056 | 0.110 | 0.155 |
| 73/07/28 | 09 45 | | 0.410 | 0.620 | 0.021 | 0.180 | 0.260 |
| 73/09/07 | 13 40 | | 0.010K | 0.605 | 0.012 | 0.065 | 0.100 |
| 73/10/06 | 10 15 | | 0.010K | 1.400 | 0.147 | 0.078 | 0.145 |
| 73/11/04 | 09 15 | | 0.033 | 1.750 | 0.180 | 0.138 | 0.195 |
| 73/12/14 | 13 22 | | 0.312 | 0.180 | 0.016 | 0.080 | 0.095 |
| 74/01/09 | 13 25 | | 0.330 | 0.600 | 0.024 | 0.160 | 0.400 |
| 74/02/03 | 09 30 | | 0.410 | 0.700 | 0.120 | 0.085 | 0.200 |
| 74/02/17 | 09 20 | | 0.104 | 0.200 | 0.005 | 0.040 | 0.065 |
| 74/03/04 | 11 20 | | 0.032 | 0.400 | 0.015 | 0.055 | 0.075 |
| 74/03/25 | 10 00 | | 0.208 | 0.100 | 0.030 | 0.065 | 0.080 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

472001
36 15 55.0 086 25 38.0 4
SPENCER CREEK
47 7.5 LAGUARDO
T/OLD HICKORY RES 052091
RD BRDG 2.3 MI S OF LAGUARDO
TENNESSEE 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 11 00 | | 0.010K | 0.220 | 0.023 | 0.022 | 0.035 |
| 73/05/12 | 10 45 | | 0.105 | 1.150 | 0.031 | 0.054 | 0.085 |
| 73/06/09 | 09 50 | | 0.240 | 1.100 | 0.034 | 0.076 | 0.100 |
| 73/07/01 | 09 55 | | 0.072 | 0.810 | 0.033 | 0.060 | 0.095 |
| 73/07/28 | 10 00 | | 0.084 | 0.540 | 0.005K | 0.126 | 0.180 |
| 73/09/02 | 13 55 | | 0.010K | 1.500 | 0.033 | 0.210 | 0.390 |
| 73/10/04 | 11 06 | | 0.010K | 2.600 | 0.390 | 0.110 | 0.345 |
| 73/11/04 | 09 30 | | 0.010K | 2.200 | 0.500 | 0.120 | 0.145 |
| 73/12/14 | 13 09 | | 0.384 | 0.200 | 0.012 | 0.064 | 0.075 |
| 74/01/09 | 13 15 | | 0.420 | 0.400 | 0.012 | 0.152 | 0.240 |
| 74/02/03 | 09 45 | | 0.450 | 0.300 | 0.025 | 0.095 | 0.180 |
| 74/02/17 | 09 35 | | 0.070 | 0.100 | 0.005K | 0.035 | 0.045 |
| 74/03/04 | 11 35 | | 0.012 | 0.300 | 0.015 | 0.035 | 0.055 |
| 74/03/25 | 10 15 | | 0.160 | 0.200 | 0.015 | 0.045 | 0.060 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

472001
36 16 17.0 086 20 59.0 4
HARTONS CREEK
47 7.5 HUNTERS POIN
T/OLD HICKORY RES 052091
SEC RD 6300 BRDG .4 W OF OAKLAND
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 11 | 10 | 0.120 | 0.630 | 0.042 | 0.260 | 0.340 |
| 73/05/12 | 11 | 15 | 0.390 | 1.320 | 0.147 | 0.294 | 0.400 |
| 73/06/09 | 10 | 05 | 0.400 | 2.310 | 0.088 | 0.252 | 0.310 |
| 73/07/01 | 10 | 15 | 0.460 | 4.200 | 0.800 | 2.600 | 2.600 |
| 73/07/28 | 10 | 15 | 0.810 | 0.900 | 0.100 | 0.430 | 0.560 |
| 73/09/02 | 14 | 10 | 0.380 | 4.800 | 3.200 | 6.300 | 6.500 |
| 73/10/06 | 11 | 12 | 0.270 | 7.200 | 4.100 | 5.460 | 7.200 |
| 73/11/04 | 09 | 40 | 0.810 | 5.600 | 2.100 | 1.500 | 1.650 |
| 73/12/14 | 12 | 56 | 0.800 | 1.800 | 0.510 | 1.200 | 1.300 |
| 74/01/09 | 13 | 00 | 0.368 | 1.000 | 0.028 | 0.176 | 0.560 |
| 74/02/03 | 10 | 05 | 0.570 | 1.000 | 0.080 | 0.110 | 0.240 |
| 74/02/17 | 09 | 50 | 0.520 | 0.650 | 0.065 | 0.525 | 0.737 |
| 74/03/04 | 11 | 45 | 0.910 | 0.700 | 0.150 | 0.540 | 0.680 |
| 74/03/25 | 10 | 30 | 0.490 | 0.400 | 0.100 | 0.220 | 0.270 |

4720E1
36 16 50.0 086 16 30.0 4
SPRING CREEK
47 7.5 HUNTERS POIN
T/OLD HICKORY RES 052091
US HWY 231 AROD 1.4 MI SSW OF HUNTERS PT
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 11 | 35 | 0.013 | 0.370 | 0.015 | 0.027 | 0.045 |
| 73/05/12 | 11 | 45 | 0.200 | 0.780 | 0.036 | 0.074 | 0.120 |
| 73/06/09 | 10 | 30 | 0.150 | 2.400 | 0.069 | 0.068 | 0.110 |
| 73/07/01 | 10 | 35 | 0.110 | 0.350 | 0.029 | 0.110 | 0.140 |
| 73/07/28 | 10 | 30 | 0.620 | 0.660 | 0.020 | 0.230 | 0.315 |
| 73/09/02 | 14 | 35 | 0.022 | 0.720 | 0.046 | 0.140 | 0.177 |
| 73/10/06 | 11 | 35 | 0.010K | 1.200 | 0.138 | 0.176 | 0.270 |
| 73/11/04 | 10 | 00 | 0.015 | 1.700 | 0.232 | 0.140 | 0.145 |
| 73/12/14 | 12 | 34 | 0.270 | 0.100 | 0.020 | 0.060 | |
| 74/01/09 | 11 | 30 | 0.232 | 1.600 | 0.024 | 0.300 | 1.400 |
| 74/02/03 | 10 | 30 | 0.470 | 1.300 | 0.175 | 0.150 | 0.440 |
| 74/02/17 | 10 | 00 | 0.152 | 0.100 | 0.015 | | 0.065 |
| 74/03/04 | 12 | 00 | 0.120 | 0.400 | 0.040 | | 0.075 |
| 74/03/25 | 11 | 00 | 0.270 | 0.100 | 0.025 | 0.050 | 0.060 |



K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 78/09/09

4720F1
36 1m 06.0 J86 13 13.0 4
CEDAR CREEK (EASTERN)
47 7.5 BELLWOOD
T/OLD HICKORY RES 052091
SEC RD BRDG BETWEEN CEDAR CR & CONWAY SC
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 13 00 | | 0.031 | 0.290 | 0.046 | 0.020 | 0.035 |
| 73/05/12 | 12 45 | | 0.360 | 1.760 | 0.036 | 0.058 | 0.090 |
| 73/06/09 | 11 30 | | 0.294 | 2.200 | 0.525 | 0.065 | 0.100 |
| 73/07/01 | 12 50 | | 0.440 | 0.820 | 0.040 | 0.220 | 0.390 |
| 73/07/28 | 10 55 | | 0.600 | 0.500 | 0.011 | 0.154 | 0.235 |
| 73/09/02 | 15 15 | | 0.132 | 0.910 | 0.026 | 0.160 | 0.200 |
| 73/10/06 | 12 05 | | 0.012 | 1.550 | 0.198 | 0.124 | 0.195 |
| 73/11/04 | 10 20 | | 0.076 | 2.300 | 0.300 | | 0.022 |
| 73/12/14 | 11 50 | | 0.460 | 0.700 | 0.032 | 0.064 | |
| 74/01/09 | 11 15 | | 0.310 | 0.700 | 0.016 | 0.208 | 0.500 |
| 74/02/03 | 10 45 | | 0.528 | 0.500 | 0.045 | 0.090 | 0.175 |
| 74/02/17 | 10 30 | | 0.312 | 0.100 | 0.030 | 0.055 | 0.060 |
| 74/03/04 | 12 20 | | 0.192 | 0.900 | 0.330 | 0.045 | 0.060 |
| 74/03/25 | 11 30 | | 0.368 | 0.300 | 0.080 | 0.060 | 0.100 |

STORET RETRIEVAL DATE 76/09/30

472061
36 15 45.0 086 04 06.0 4
ROUND LICK CREEK
47 7.5 DIXON SPRING
T/OLD HICKORY RES 052091
IN HWY 24/US HWY 70N BRDG AT ROME
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 13 25 | | 0.031 | 0.240 | 0.011 | 0.048 | 0.075 |
| 73/05/12 | 14 10 | | 0.252 | 0.765 | 0.029 | 0.087 | 0.135 |
| 73/06/09 | 12 05 | | 0.168 | 2.400 | 0.105 | 0.100 | 0.150 |
| 73/07/01 | 13 30 | | 0.440 | 0.980 | 0.028 | 0.260 | 0.460 |
| 73/07/28 | 12 20 | | 0.410 | 0.840 | 0.005K | 0.300 | 0.400 |
| 73/09/02 | 16 10 | | 0.084 | 0.520 | 0.018 | 0.015 | 0.060 |
| 73/10/06 | 12 40 | | 0.160 | 1.250 | 0.078 | 0.021 | 0.090 |
| 73/11/04 | 11 30 | | 0.252 | 0.800 | 0.120 | 0.026 | 0.045 |
| 73/12/14 | 11 18 | | 0.300 | 0.600 | 0.120 | 0.022 | 0.050 |
| 74/01/09 | 10 45 | | 0.276 | 1.850 | 0.016 | 0.290 | |
| 74/02/03 | 12 00 | | 0.352 | 7.200 | 1.050 | 0.180 | 0.550 |
| 74/02/17 | 11 00 | | 0.410 | 0.200 | 0.025 | 0.065 | 0.120 |
| 74/03/04 | 13 00 | | 0.224 | 0.200 | 0.035 | 0.055 | 0.110 |
| 74/03/25 | 12 30 | | 0.380 | 0.200 | 0.025 | 0.070 | 0.090 |

-78

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/09/09

4720H1
36 18 25.0 086 00 30.0 4
PEYTON CREEK
47 SMITH CO IN MAP
T/OLD HICKORY RES 052091
IN HWY 25 .5 MI SE OF RIDDLETON
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 14 30 | | 0.460 | 0.190 | 0.013 | 0.113 | 0.145 |
| 73/05/12 | 15 25 | | 0.830 | 0.290 | 0.032 | 0.138 | 0.175 |
| 73/06/09 | 12 55 | | 0.840 | 1.100 | 0.056 | 0.180 | 0.315 |
| 73/07/01 | 14 10 | | 1.140 | 0.920 | 0.027 | 0.345 | 0.800 |
| 73/07/28 | 13 00 | | 0.980 | 0.490 | 0.008 | 0.180 | 0.250 |
| 73/09/02 | 16 55 | | 0.690 | 1.150 | 0.320 | 0.200 | 0.410 |
| 73/10/06 | 13 15 | | 0.220 | 1.000 | 0.132 | 0.168 | 0.370 |
| 73/11/04 | 12 00 | | 0.520 | 1.650 | 0.300 | 0.168 | 0.250 |
| 73/12/14 | 10 42 | | 1.200 | 0.100 | 0.024 | 0.176 | 0.220 |
| 74/01/09 | 10 15 | | 0.616 | 0.800 | 0.016 | 0.336 | 0.800 |
| 74/02/03 | 13 30 | | 0.740 | 2.100 | 0.320 | 0.210 | 0.460 |
| 74/02/17 | 12 30 | | 0.780 | 0.400 | 0.020 | 0.130 | 0.210 |
| 74/03/04 | 14 30 | | 0.720 | 0.400 | 0.100 | 0.130 | 0.190 |
| 74/03/25 | 13 30 | | 1.090 | 0.200 | 0.030 | 0.135 | 0.155 |

472001
36 22 26.0 086 08 15.0 4
GOOSE CREEK
47 TROUSDALE CO TN
T/OLD HICKORY RES 0520V1
SEC RD BRDG .5 MI S OF E TIP HARTSVILLE
11EPALES 211120V
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 14 | 45 | 0.420 | 0.272 | 0.010 | 0.105 | 0.140 |
| 73/05/12 | 15 | 45 | 0.760 | 0.660 | 0.025 | 0.132 | 0.185 |
| 73/06/09 | 13 | 15 | 0.860 | 0.880 | 0.022 | 0.170 | 0.213 |
| 73/07/01 | 14 | 30 | 0.610 | 0.340 | 0.023 | 0.189 | 0.240 |
| 73/07/28 | 13 | 20 | 1.320 | 0.120 | 0.007 | 0.220 | 0.270 |
| 73/09/02 | 14 | 20 | 0.010K | 0.840 | 0.147 | 0.094 | 0.175 |
| 73/10/06 | 13 | 30 | 0.042 | 1.400 | 0.078 | 0.089 | 0.230 |
| 73/11/04 | 12 | 15 | 0.140 | 1.350 | 0.170 | 0.154 | 0.265 |
| 73/12/14 | 10 | 26 | 1.300 | 0.100 | 0.016 | 0.176 | 0.210 |
| 74/01/09 | 09 | 45 | 0.590 | 0.800 | 0.020 | 0.352 | 0.800 |
| 74/02/03 | 14 | 00 | 0.990 | 1.800 | 0.150 | 0.155 | 0.275 |
| 74/02/17 | 12 | 20 | 0.960 | 0.300 | 0.030 | 0.135 | 0.175 |
| 74/03/04 | 14 | 45 | 0.850 | 0.200 | 0.030 | 0.150 | 0.210 |
| 74/03/25 | 14 | 00 | 1.060 | 0.200 | 0.017 | 0.145 | 0.175 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/09/09

472061
36 23 30.0 086 10 00.0 4
LITTLE GOOSE CREEK
47 TROUSDALE CO TN
T/OLD HICKORY RES 052091
MAIN ST BRDG IN HARTSVILLE
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 15 17 | | 0.044 | 0.360 | 0.006 | 0.100 | 0.125 |
| 73/05/12 | 16 05 | | 0.340 | 0.700 | 0.010 | 0.150 | 0.190 |
| 73/06/09 | 13 25 | | 0.680 | 1.200 | 0.042 | 0.189 | 0.240 |
| 73/07/02 | 08 30 | | 0.110 | 0.480 | 0.021 | 0.180 | 0.240 |
| 73/07/28 | 13 30 | | 1.160 | 0.190 | 0.012 | 0.260 | 0.320 |
| 73/09/02 | 17 30 | | 0.066 | 0.750 | 0.050 | 0.176 | 0.230 |
| 73/10/06 | 13 40 | | 0.700 | 1.300 | 0.336 | 0.440 | 0.550 |
| 73/11/04 | 12 25 | | 0.052 | 1.100 | 0.180 | 0.230 | 0.300 |
| 73/12/14 | 10 17 | | 0.970 | 0.300 | 0.032 | 0.176 | 0.230 |
| 74/01/09 | 09 30 | | 0.860 | 0.600 | 0.016 | 0.360 | 0.870 |
| 74/02/03 | 14 00 | | 1.060 | 1.500 | 0.140 | 0.175 | 0.230 |
| 74/02/17 | 13 00 | | 0.500 | 0.500 | 0.020 | 0.120 | 0.240 |
| 74/03/04 | 15 00 | | 1.680 | 0.450 | 0.055 | 0.128 | 0.168 |
| 74/03/25 | 14 30 | | 0.910 | 0.200 | 0.035 | 0.170 | 0.180 |

472061
36 23 55.0 086 20 35.0 4
BLEDSOE CREEK
47 SUMNER CO TN MAP
T/OLD HICKORY RES 052091
BANK BELO CRAGFONT HOUSE
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 16 30 | | 0.060 | 0.210 | 0.005K | 0.048 | 0.070 |
| 73/05/12 | 16 30 | | 0.220 | 0.230 | 0.033 | 0.074 | 0.110 |
| 73/06/09 | 13 50 | | 0.147 | 1.470 | 0.190 | 0.096 | 0.290 |
| 73/07/02 | 09 00 | | 0.054 | 0.540 | 0.014 | 0.099 | 0.165 |
| 73/07/28 | 13 50 | | 0.066 | 1.260 | 0.009 | 0.190 | 0.375 |
| 73/09/07 | 17 55 | | 0.010K | 1.090 | 0.058 | 0.082 | 0.190 |
| 73/10/06 | 14 00 | | 0.012 | 1.250 | 0.069 | 0.092 | 0.250 |
| 73/11/04 | 13 00 | | 0.168 | 1.700 | 0.138 | 0.120 | 0.175 |
| 73/12/14 | 09 45 | | 0.830 | 1.600 | 0.352 | 0.128 | 0.160 |
| 74/01/09 | 09 00 | | 0.520 | 0.800 | 0.020 | 0.300 | 0.870 |
| 74/02/03 | 14 30 | | 0.792 | 1.000 | 0.115 | 0.100 | 0.210 |
| 74/02/17 | 14 00 | | 0.430 | 0.800 | 0.035 | 0.080 | 0.130 |
| 74/03/04 | 16 00 | | 0.420 | 1.300 | 0.360 | 0.075 | 0.120 |
| 74/03/25 | 15 00 | | 0.640 | 0.200 | 0.030 | 0.095 | 0.100 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

472041
36 21 44.0 086 28 02.0 4
TOWN CREEK
47 7.5 LAGUARDO
T/OLD HICKORY RES 052091
SEC RD 5283 BRDG UPSTREAM OF CON E CAMP
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 08 | 50 | 0.460 | 0.300 | 0.005K | 0.168 | 0.220 |
| 73/05/12 | 08 | 25 | 0.770 | 0.300 | 0.019 | 0.231 | 0.300 |
| 73/06/09 | 07 | 50 | 0.800 | 1.800 | 0.096 | 0.210 | 0.260 |
| 73/07/01 | 08 | 10 | 0.200 | 1.760 | 0.098 | 0.126 | 0.350 |
| 73/07/28 | 08 | 15 | 0.105 | 1.200 | 0.005K | 0.147 | 0.390 |
| 73/09/02 | 12 | 00 | 0.010K | 2.800 | 0.020 | 0.138 | 0.480 |
| 73/10/06 | 08 | 55 | 0.168 | 2.100 | 0.198 | 0.091 | 0.375 |
| 73/11/04 | 08 | 00 | 0.910 | 2.200 | 0.250 | 0.120 | 0.130 |
| 73/12/15 | 08 | 10 | 1.400 | 1.300 | 0.152 | 0.200 | 0.260 |
| 74/01/09 | 11 | 00 | 1.180 | 2.200 | 0.384 | 0.500 | 0.960 |
| 74/02/03 | 08 | 30 | 1.200 | 1.100 | 0.240 | 0.210 | 0.330 |
| 74/02/17 | 07 | 30 | 0.810 | 0.400 | 0.015 | 0.163 | 0.285 |
| 74/03/04 | 10 | 00 | 0.528 | 0.400 | 0.040 | 0.180 | 0.290 |
| 74/03/25 | 08 | 00 | 1.120 | 0.200 | 0.010 | 0.210 | 0.220 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

472091
36 22 10.0 086 29 04.0 4
E CAMP CREEK
47 7.5 LAGUARDO
T/OLD HICKORY RES 352091
US HWY 31E BRDG 5 MI SW OF HWY 109 JCT
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 09 05 | | 0.240 | 0.280 | 0.029 | 0.130 | 0.170 |
| 73/05/12 | 08 45 | | 0.540 | 0.300 | 0.040 | 0.190 | 0.250 |
| 73/06/09 | 08 10 | | 0.990 | 5.400 | 0.240 | 0.240 | 0.290 |
| 73/07/01 | 08 15 | | 0.120 | 1.890 | 0.026 | 0.150 | 0.340 |
| 73/07/28 | 08 25 | | 0.115 | 1.100 | 0.015 | 0.168 | 0.370 |
| 73/09/02 | 12 20 | | 0.017 | 1.500 | 0.008 | 0.084 | 0.330 |
| 73/10/06 | 09 05 | | 0.024 | 1.450 | 0.086 | 0.085 | 0.360 |
| 73/11/04 | 08 10 | | 0.770 | 3.750 | 0.440 | 0.330 | 0.470 |
| 73/12/15 | 08 45 | | 1.300 | 1.700 | 0.240 | 0.264 | 0.300 |
| 74/01/04 | 14 20 | | 1.610 | 0.700 | 0.052 | 0.280 | 0.460 |
| 74/02/03 | 08 40 | | 1.010 | 1.100 | 0.195 | 0.210 | 0.370 |
| 74/02/17 | 14 50 | | 0.810 | 0.300 | 0.015 | 0.170 | 0.220 |
| 74/03/04 | 10 10 | | 0.650 | 0.500 | 0.035 | 0.185 | 0.270 |
| 74/03/25 | 08 30 | | 1.100 | 0.200 | 0.025 | 0.185 | 0.200 |

82

STORET RETRIEVAL DATE 74/09/09

472091
36 20 46.0 086 31 30.0 4
STATION CAMP CREEK
47 7.5 HENDERSONVIL
TN OLD HICKORY RES 052091
RD 6284 BRDG 3.5 MI SE OF OCANA
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 09 20 | | 0.115 | 0.600 | 0.009 | 0.060 | 0.105 |
| 73/05/12 | 09 00 | | 0.290 | 0.260 | 0.036 | 0.092 | 0.170 |
| 73/06/09 | 09 17 | | 0.440 | | 0.380 | 0.132 | 0.290 |
| 73/07/01 | 08 20 | | 0.200 | 1.540 | 0.130 | 0.099 | 0.260 |
| 73/07/28 | 08 30 | | 0.176 | 0.880 | 0.009 | 0.180 | 0.360 |
| 73/09/07 | 12 40 | | 0.010K | 1.306 | 0.024 | 0.041 | 0.195 |
| 73/10/05 | 09 10 | | 0.010K | 1.750 | 0.096 | 0.058 | 0.270 |
| 73/11/04 | 08 15 | | 0.048 | 1.550 | 0.160 | 0.042 | 0.145 |
| 73/12/15 | 09 00 | | 0.980 | 0.750 | 0.120 | 0.132 | 0.158 |
| 74/01/09 | 14 30 | | 0.650 | 0.500 | 0.027 | 0.136 | 0.260 |
| 74/02/03 | 08 45 | | 0.690 | 1.300 | 0.200 | 0.100 | 0.210 |
| 74/02/17 | 08 15 | | 0.352 | 0.200 | 0.010 | 0.085 | 0.120 |
| 74/03/04 | 10 15 | | 0.264 | 0.700 | 0.050 | 0.085 | 0.145 |
| 74/03/25 | 08 45 | | 0.510 | 0.200 | 0.015 | 0.090 | 0.105 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/09/09

472041
36 18 17.0 086 36 49.0 4
DRAKES CREEK
47 7.5 HENDERSONVI
T/OLD HICKORY RES 052041
US HWY 31E BRDG JUST E OF HENDERSONVILLE
TENNESSEE 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/15 | 09 | 35 | 0.198 | 0.330 | 0.022 | 0.050 | 0.110 |
| 73/05/12 | 09 | 15 | 0.340 | 0.630 | 0.084 | 0.072 | 0.200 |
| 73/06/09 | 08 | 28 | 0.154 | 3.140 | 0.510 | 0.067 | 0.130 |
| 73/07/01 | 08 | 35 | 0.092 | 2.500 | 0.036 | 0.105 | 0.400 |
| 73/07/28 | 08 | 40 | 0.168 | 1.100 | 0.005K | 0.138 | 0.355 |
| 73/09/02 | 12 | 45 | 0.010K | 1.470 | 0.050 | 0.092 | 0.410 |
| 73/10/06 | 09 | 20 | 0.010K | 1.800 | 0.061 | 0.069 | 0.360 |
| 73/11/04 | 08 | 20 | 0.336 | 2.600 | 0.390 | 0.126 | 0.350 |
| 73/12/15 | 09 | 00 | 0.970 | 0.900 | 0.092 | 0.096 | 0.145 |
| 74/01/09 | 11 | 45 | 0.700 | 0.300 | 0.048 | 0.124 | 0.220 |
| 74/02/03 | 09 | 00 | 0.760 | 0.600 | 0.075 | 0.145 | 0.410 |
| 74/02/17 | 08 | 20 | 0.430 | 0.100 | 0.020 | 0.065 | 0.075 |
| 74/03/04 | 10 | 40 | 0.390 | 0.400 | 0.055 | 0.080 | 0.220 |
| 74/03/25 | 09 | 00 | 0.660 | 0.200 | 0.020 | 0.065 | 0.124 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

4720KA TF4720KA 01001500
36 23 25.0 086 09 47.0 4
HARTSVILLE
47 TROUSDALE CO MAP
T/OLD HICKORY LAKE 052091
LITTLE GOOSE CREEK
11EPALES 2141204
0900 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/05/30 | 12 | 45 | 1.580 | 14.700 | 0.862 | 6.760 | 9.600 | 0.122 | 0.125 |
| 73/06/27 CP(T)- | 10 | 15 | 0.085 | 24.000 | 12.400 | 14.350 | 17.000 | 0.100 | 0.100 |
| 73/06/28 | 10 | 15 | | | | | | | |
| 73/07/31 | 15 | 35 | 2.300 | 11.500 | 6.900 | | 16.000 | 0.100 | 0.100 |
| 73/08/30 | 14 | 30 | 5.100 | 19.600 | 10.900 | 16.350 | 17.500 | 0.100 | 0.100 |
| 73/10/04 | 15 | 30 | 5.000 | 24.500 | 11.600 | 17.450 | 19.970 | 0.100 | 0.100 |
| 73/10/30 | 08 | 30 | 4.100 | 24.000 | 12.600 | 16.000 | 19.500 | 0.120 | 0.130 |
| 73/11/29 | 10 | 30 | 3.300 | 5.900 | 0.088 | 3.500 | 5.000 | 0.150 | 0.120 |
| 74/01/03 | 08 | 07 | 2.800 | 16.000 | 5.600 | 11.600 | 13.000 | 0.150 | 0.130 |
| 74/01/30 | 08 | 00 | 0.360 | 12.000 | 3.950 | 2.520 | 3.500 | 0.130 | 0.150 |
| 74/02/27 | 08 | 00 | 1.400 | 18.000 | 7.100 | 11.000 | 11.000 | 0.140 | 0.140 |
| 74/03/28 | 08 | 01 | 1.040 | 25.580 | 5.750 | 11.000 | 14.800 | 0.150 | 0.135 |
| 74/04/30 | 08 | 00 | 0.440 | 27.000 | 11.500 | 13.000 | 17.000 | 0.130 | 0.140 |

STORET RETRIEVAL DATE 76/09/09

47200A AS47200A P002100
36 18 00.0 086 36 50.0 4
HENDERSONVILLE
47 7.5 HENDERSONVIL
T/OLD HICKORY LAKE 052091
DRAKES CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/08/16 | 15 | 30 | 3.900 | 2.100 | 0.480 | 6.500 | 6.500 | 0.655 | 0.500 |
| 73/09/27 | 16 | 00 | 1.700 | 5.900 | 0.245 | 13.000 | 17.000 | 0.650 | 0.700 |
| 73/11/19 | 13 | 00 | 5.400 | 3.300 | 0.065 | 10.400 | 10.500 | 1.400 | 0.600 |
| 73/12/12 | 14 | 00 | 3.900 | 5.900 | 0.110 | 7.800 | 8.800 | 0.686 | 0.650 |
| 74/01/22 | 14 | 00 | 4.100 | 6.650 | 0.054 | 5.600 | 6.700 | 1.600 | 0.600 |
| 74/03/15 | 08 | 00 | 0.040 | 7.500 | 0.050K | 0.120 | 6.500 | 0.980 | 0.600 |
| 74/04/29 | 10 | 00 | 0.840 | 7.900 | 0.130 | 6.400 | 7.700 | 0.644 | 0.800 |
| 74/06/07 | 14 | 00 | 1.840 | 3.800 | 0.050K | 4.200 | 4.700 | 0.650 | 0.600 |
| 74/07/05 | 11 | 00 | 0.520 | 7.000 | 0.600 | 7.100 | 8.100 | 0.500 | 0.600 |
| 74/09/16 | 15 | 30 | 1.680 | 5.200 | 0.033 | 4.400 | 5.400 | 1.070 | 0.600 |
| 74/10/30 | 13 | 00 | 1.360 | 11.000 | 0.630 | 5.670 | 6.800 | 0.800 | 0.600 |
| 74/11/20 | 09 | 00 | 6.685 | 1.500 | 0.057 | 7.245 | 7.675 | 1.200 | 0.800 |

-76-

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

472341
35 56 30.0 086 22 42.0 4
E FK STONES RIVER
47 7.5 WALTER HILL
T/PERCY PRIEST RES 052091
TN HWY 10/US HWY 231 BRDG .5 S WALTENHIL
11EPALES 211204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/13 | 13 55 | | 0.380 | 0.100K | 0.007 | 0.036 | 0.045 |
| 73/05/14 | 11 45 | | 0.530 | 0.200 | 0.019 | 0.054 | 0.090 |
| 73/06/14 | 10 15 | | 0.520 | 0.350 | 0.021 | 0.060 | 0.110 |
| 73/07/14 | 09 50 | | 0.660 | 0.720 | 0.160 | 0.140 | 0.230 |
| 73/08/14 | 09 40 | | 0.340 | 0.440 | 0.052 | 0.115 | 0.160 |
| 73/09/13 | 10 20 | | 0.050 | 0.440 | 0.048 | 0.096 | 0.145 |
| 73/10/15 | 09 45 | | 0.680 | 1.450 | 0.240 | 0.250 | 0.345 |
| 73/11/14 | 10 15 | | 0.470 | 3.200 | 0.840 | 0.016 | 0.040 |
| 73/12/19 | 10 20 | | 0.810 | 1.300 | 0.224 | 0.076 | 0.280 |
| 74/01/14 | 10 30 | | 0.880 | 0.100 | 0.005K | 0.052 | 0.080 |
| 74/02/01 | 09 15 | | 0.792 | 0.200 | 0.010 | 0.055 | 0.065 |
| 74/02/15 | 09 30 | | 0.570 | 0.700 | 0.025 | 0.125 | 0.340 |
| 74/03/01 | 09 30 | | 0.600 | 0.300 | 0.015 | 0.041 | 0.064 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/07/09

*72381
35 56 26.0 086 27 56.0 4
* FK STONES RIVER
47 7.5 *ALTER HILL
T/PERCY PRIEST RES 052091
SULPHER SPRS RD BRDG 2 MI * OF LEANNA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/13 | 13 35 | | 0.630 | 0.250 | 0.031 | 0.110 | 0.137 |
| 73/05/14 | 10 45 | | 0.930 | 0.230 | 0.010 | 0.120 | 0.165 |
| 73/06/14 | 09 45 | | 0.850 | 0.560 | 0.046 | 0.168 | 0.230 |
| 73/07/14 | 09 20 | | 1.180 | 0.630 | 0.210 | 0.320 | 0.380 |
| 73/08/14 | 09 05 | | 1.180 | 0.660 | 0.079 | 0.280 | 0.330 |
| 73/09/13 | 09 59 | | 1.220 | 0.920 | 0.033 | 1.400 | 1.600 |
| 73/10/15 | 09 30 | | 1.220 | 1.150 | 0.210 | 1.260 | 1.650 |
| 73/11/14 | 10 00 | | 1.040 | 2.800 | 0.710 | 0.504 | 0.570 |
| 73/12/18 | 10 05 | | 1.260 | 1.100 | 0.300 | 0.225 | 0.280 |
| 74/01/14 | 10 10 | | 1.010 | 0.200 | 0.008 | 0.048 | 0.090 |
| 74/02/01 | 09 00 | | 0.990 | 0.200 | 0.015 | 0.095 | 0.120 |
| 74/02/15 | 09 10 | | 0.660 | 0.600 | 0.020 | 0.125 | 0.270 |
| 74/03/01 | 09 15 | | 0.990 | 0.400 | 0.045 | 0.155 | 0.230 |

86

STORET RETRIEVAL DATE 76/09/09

472301
36 01 00.0 086 24 01.0 4
FALL CREEK
47 7.5 GLADEVILLE
T/PERCY PRIEST RES 052091
PHILLIPS RD BRDG 3 MI N OF MONA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/13 | 14 15 | | 0.027 | 0.210 | 0.010 | 0.017 | 0.030 |
| 73/05/14 | 11 20 | | 0.052 | 0.280 | 0.008 | 0.024 | 0.045 |
| 73/06/14 | 10 20 | | 0.040 | 0.790 | 0.019 | 0.024 | 0.065 |
| 73/08/14 | 10 00 | | 0.250 | 0.870 | 0.028 | 0.056 | 0.110 |
| 73/12/18 | 10 35 | | 0.132 | 1.500 | 0.288 | | 0.025 |
| 74/01/14 | 10 50 | | 0.550 | 0.100K | 0.005K | | 0.020 |
| 74/02/01 | 09 30 | | 0.320 | 0.100 | 0.005 | 0.045 | 0.055 |
| 74/02/15 | 09 40 | | 0.156 | 0.100 | 0.010 | 0.025 | 0.030 |
| 74/03/01 | 09 45 | | 0.096 | 0.300 | 0.025 | 0.015 | 0.015 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

472301
36 07 47.0 086 31 12.0 4
SUGGS CREEK
47 7.5 HERMITAGE
T/PERCY PRIEST RES 052091
MT JULIET RD BRDG 6 MI NW OF GLADEVILLE
11EPALES 211204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/13 | 15 | 15 | 0.027 | 0.170 | 0.006 | 0.005K | 0.015 |
| 73/05/14 | 12 | 25 | 0.063 | 0.180 | 0.005K | 0.006 | 0.020 |
| 73/06/14 | 11 | 45 | 0.031 | 0.430 | 0.016 | 0.010 | 0.025 |
| 73/07/14 | 10 | 20 | 0.046 | 0.820 | 0.063 | 0.018 | 0.035 |
| 73/08/14 | 10 | 30 | 0.030 | 0.500 | 0.039 | 0.014 | 0.050 |
| 73/12/18 | 11 | 00 | 0.208 | 1.300 | 0.470 | 0.068 | 0.095 |
| 74/01/14 | 11 | 20 | 0.540 | 0.100 | 0.005K | 0.020 | 0.035 |
| 74/02/01 | 10 | 40 | 0.312 | 0.100K | 0.005 | 0.010 | 0.010 |
| 74/02/15 | 10 | 20 | 0.156 | 0.100K | 0.010 | 0.010 | 0.010 |
| 74/03/01 | 10 | 20 | 0.112 | 0.200 | 0.005 | 0.005K | 0.015 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

100

STORET RETRIEVAL DATE 76/09/09

4723E1
36 09 27.0 086 37 13.0 4
STONES CREEK
47 7.5 HERMITAGE
UPPERCY PRIEST RES 052091
BANK BELO DAM ON W SIDE
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/13 | 15 | 25 | 0.430 | 0.440 | 0.063 | 0.054 | 0.095 |
| 73/05/14 | 12 | 35 | 0.294 | 0.380 | 0.039 | 0.022 | 0.060 |
| 73/06/14 | 12 | 15 | 0.198 | 0.420 | 0.060 | 0.038 | 0.070 |
| 73/07/14 | 11 | 45 | 0.068 | 0.950 | 0.189 | 0.050 | 0.155 |
| 73/08/14 | 11 | 15 | 0.013 | | 0.240 | 0.300 | 0.960 |
| 73/09/13 | 11 | 40 | 0.019 | 1.540 | 0.990 | 0.064 | 0.280 |
| 73/10/15 | 11 | 00 | 0.016 | 3.300 | 1.500 | | 0.380 |
| 73/11/14 | 11 | 20 | 0.012 | 0.650 | 0.060 | 0.012 | 0.015 |
| 73/12/18 | 11 | 30 | 0.270 | 1.300 | 0.192 | 0.068 | 0.095 |
| 74/01/14 | 11 | 45 | 0.570 | 0.300 | 0.056 | 0.084 | 0.125 |
| 74/02/01 | 11 | 00 | 0.540 | 0.300 | 0.030 | 0.075 | 0.115 |
| 74/02/15 | 10 | 40 | 0.600 | 0.200 | 0.027 | 0.063 | 0.090 |
| 74/03/01 | 10 | 45 | 0.588 | 0.400 | 0.015 | 0.055 | 0.100 |

STORET RETRIEVAL DATE 76/09/09

4723F1
36 01 30.0 096 35 15.0 4
HURRICANE CREEK
47 7.5 LAVERGNE
TENNESSEE PRIEST RES 052041
TN HWY 1/US HWY 41-70S BRDG .5 N LAVERGN
11EPALES 211120-
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/13 | 13 55 | | 0.016 | 0.240 | 0.007 | 0.054 | 0.090 |
| 73/05/14 | 13 30 | | 0.012 | 0.250 | 0.005K | 0.078 | 0.125 |
| 73/06/14 | 13 00 | | 0.023 | 0.340 | 0.007 | 0.093 | 0.150 |
| 73/07/14 | 08 30 | | 0.015 | 0.720 | 0.088 | 0.089 | 0.210 |
| 73/08/14 | 12 00 | | 0.065 | 0.560 | 0.019 | 0.058 | 0.185 |
| 73/09/13 | 12 10 | | 0.017 | 0.350 | 0.081 | 0.046 | 0.105 |
| 73/10/15 | 11 20 | | 0.010K | 1.150 | 0.105 | 0.022 | 0.035 |
| 73/11/14 | 11 45 | | 0.092 | 1.900 | 0.500 | 0.064 | 0.165 |
| 73/12/18 | 11 50 | | 0.200 | 0.900 | 0.168 | 0.068 | 0.082 |
| 74/01/14 | 12 10 | | 1.010 | 0.100 | 0.012 | 0.156 | 0.200 |
| 74/02/01 | 11 20 | | 0.530 | 0.300 | 0.010 | 0.110 | 0.125 |
| 74/02/15 | 11 05 | | 0.300 | 0.100 | 0.010 | 0.095 | 0.115 |
| 74/03/01 | 11 05 | | 0.288 | 0.300 | 0.010 | 0.095 | 0.130 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

472361
35 58 04.0 086 30 25.0 4
STEWART CREEK
47 7.5 SMYRNA
T/PERCY PRIEST RES 052091
TN HWY 1/US HWY 41-70S BRDG 1 SE SMYRNA
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/13 | 13 | 20 | 0.440 | 0.140 | 0.007 | 0.056 | 0.070 |
| 73/05/14 | 10 | 35 | 0.520 | 0.185 | 0.008 | 0.066 | 0.105 |
| 73/06/14 | 09 | 30 | 0.420 | 0.670 | 0.013 | 0.120 | 0.260 |
| 73/07/14 | 09 | 00 | 0.430 | 0.820 | 0.071 | 0.154 | 0.420 |
| 73/08/14 | 08 | 50 | 0.660 | 0.290 | 0.018 | 0.092 | 0.160 |
| 73/09/13 | 09 | 45 | 0.480 | 0.290 | 0.073 | 0.069 | 0.128 |
| 73/10/15 | 09 | 20 | 0.260 | 0.950 | 0.088 | 0.075 | 0.135 |
| 73/11/14 | 09 | 45 | 0.132 | 1.200 | 0.610 | 0.020 | 0.020 |
| 73/12/18 | 09 | 55 | 0.770 | | 0.024 | 0.074 | 0.095 |
| 74/01/14 | 10 | 00 | 0.630 | 0.200 | 0.005K | 0.084 | 0.150 |
| 74/02/01 | 08 | 48 | 0.588 | 0.200 | 0.005 | 0.075 | 0.113 |
| 74/02/15 | 09 | 00 | 0.580 | 0.100 | 0.010 | 0.065 | 0.100 |
| 74/03/01 | 09 | 05 | 0.580 | 0.200 | 0.005 | 0.065 | 0.110 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

4723M1
35 59 11.0 086 31 16.0 4
HARTS BRANCH
47 7.5 SMYRNA
T/PERCY PRIEST RES 052091
TN HWY 1/US HWY 41-70S BRDG NE EDG SMYRN
11EPALES 211120
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/04/13 | 13 00 | | 0.210 | 0.200 | 0.029 | 0.115 | 0.130 |
| 73/05/14 | 10 26 | | 0.231 | 0.180 | 0.009 | 0.138 | 0.170 |
| 73/06/14 | 09 20 | | 0.250 | 0.330 | 0.021 | 0.150 | 0.185 |
| 73/07/14 | 08 45 | | 0.680 | 0.780 | 0.220 | 0.160 | 0.220 |
| 73/08/14 | 08 40 | | 0.500 | | 0.105 | 0.137 | 0.200 |
| 73/12/18 | 09 45 | | 0.580 | 0.156 | 0.156 | 0.035 | 0.050 |
| 74/01/14 | 09 50 | | 0.850 | 0.100 | 0.008 | 0.152 | 0.195 |
| 74/02/01 | 08 40 | | 0.650 | 0.100 | 0.005 | 0.150 | 0.160 |
| 74/02/15 | 08 55 | | 0.550 | 0.200 | 0.005 | 0.145 | 0.175 |
| 74/03/01 | 09 00 | | 0.440 | 0.200 | 0.005 | 0.135 | 0.180 |

STORET RETRIEVAL DATE 76/09/09

4723BA TF4723BA P046594
35 52 00.0 086 24 47.0 4
#1
47 7.5 MURFREESBORO
T/J PERCY PRIEST 052091
WEST FORK STONES RIVER MURFREESBORO
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/05/31 | 00 00 | | | | | | | | |
| CP(T)- | | | 0.700 | 8.500 | 0.720 | 9.000 | 11.000 | 4.200 | 3.600 |
| 73/05/31 | 24 00 | | | | | | | | |
| 73/07/01 | 00 00 | | | | | | | | |
| CP(T)- | | | 7.000 | 9.100 | 2.310 | 7.830 | 8.900 | 2.000 | 2.700 |
| 73/07/01 | 24 00 | | | | | | | | |
| 73/07/31 | 00 00 | | | | | | | | |
| CP(T)- | | | | | | | | 2.400 | 2.100 |
| 73/07/31 | 24 00 | | | | | | | | |
| 73/08/31 | 00 00 | | | | | | | | |
| CP(T)- | | | 2.000 | 17.500 | | | 17.500 | 1.900 | 2.100 |
| 73/08/31 | 24 00 | | | | | | | | |
| 73/10/31 | 00 00 | | | | | | | | |
| CP(T)- | | | 2.600 | 6.000 | 0.755 | 11.000 | 14.500 | 3.700 | 2.000 |
| 73/10/31 | 24 00 | | | | | | | | |
| 73/12/03 | 00 00 | | | | | | | | |
| CP(T)- | | | 1.400 | 13.000 | 0.300 | 5.900 | 8.700 | 3.300 | 2.500 |
| 73/12/03 | 24 00 | | | | | | | | |
| 74/01/06 | 00 00 | | | | | | | | |
| CP(T)- | | | 4.400 | 3.200 | 0.055 | 2.520 | 3.900 | 3.700 | 2.800 |
| 74/01/06 | 24 00 | | | | | | | | |
| 74/01/31 | 00 00 | | | | | | | | |
| CP(T)- | | | 6.160 | 3.300 | 0.250 | 7.100 | 9.400 | 3.900 | 4.300 |
| 74/01/31 | 24 00 | | | | | | | | |
| 74/02/28 | 00 00 | | | | | | | | |
| CP(T)- | | | 1.840 | 12.000 | 0.420 | 9.100 | 13.000 | 3.100 | 3.200 |
| 74/02/28 | 24 00 | | | | | | | | |
| 74/03/31 | 00 00 | | | | | | | | |
| CP(T)- | | | 1.160 | | 0.089 | 3.900 | 4.400 | 2.500 | 3.100 |
| 74/03/31 | 24 00 | | | | | | | | |
| 74/04/30 | 00 00 | | | | | | | | |
| CP(T)- | | | 0.840 | 16.000 | 1.050 | 9.700 | 13.800 | 2.400 | 3.400 |
| 74/04/30 | 24 00 | | | | | | | | |
| 74/06/03 | 00 00 | | | | | | | | |
| CP(T)- | | | 1.360 | 8.100 | 1.050 | 7.500 | 9.000 | 3.500 | 2.800 |
| 74/06/03 | 24 00 | | | | | | | | |

STORET RETRIEVAL DATE 76/09/24

47238A TF47238A P046594
35 52 00.0 086 24 47.0 4
#1
47 7.5 MURFREESBORO
T/J PERCY PRIEST 052091
WEST FORK STONES RIVER MURFREESBORO
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 74/06/29 | 24 | 00 | | | | | | | |
| CP(T)- | | | 2.780 | 9.500 | 2.200 | 8.300 | 8.700 | 0.780 | 1.400 |
| 74/06/30 | 24 | 00 | | | | | | | |

901

STORET RETRIEVAL DATE 76/09/09

472388 AS472388 P016982
35 49 22.0 086 24 58.0 4
MURFREESBORO #2
47 7.5 MURFREESBORO
T/J PERCY PRIEST RESERVO 052091
WEST FORK STONES RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/05/31 | 00 00 | | 6.300 | | | 2.500 | 2.500 | 1.000 | 1.200 |
| CP(T)- 73/05/31 | 24 00 | | | | | | | | |
| 73/07/01 | 00 00 | | 6.400 | 11.500 | 3.800 | 10.300 | 10.500 | 0.600 | 0.900 |
| CP(T)- 73/07/01 | 24 00 | | | | | | | | |
| 73/07/31 | 00 00 | | 1.890 | 22.000 | 7.600 | 11.000 | 12.500 | 0.700 | 0.600 |
| CP(T)- 73/07/31 | 24 00 | | | | | | | | |
| 73/08/31 | 00 00 | | 6.800 | | 7.550 | 12.000 | | 0.627 | 0.642 |
| CP(T)- 73/08/31 | 24 00 | | | | | | | | |
| 73/10/31 | 00 00 | | 5.400 | 14.500 | 4.600 | 9.400 | 12.000 | 1.100 | 0.800 |
| CP(T)- 73/10/31 | 24 00 | | | | | | | | |
| 73/12/03 | 00 00 | | 7.300 | 5.100 | 0.074 | 4.300 | 5.300 | 1.900 | 1.200 |
| CP(T)- 73/12/03 | 24 00 | | | | | | | | |
| 74/01/06 | 00 00 | | 4.500 | 2.200 | 0.040 | 2.160 | 2.700 | 1.800 | 1.400 |
| CP(T)- 74/01/06 | 24 00 | | | | | | | | |
| 74/01/31 | 00 00 | | 7.300 | | 0.086 | 4.760 | 3.200 | 1.500 | 1.700 |
| CP(T)- 74/01/31 | 24 00 | | | | | | | | |
| 74/02/28 | 00 00 | | 7.500 | 3.300 | 0.160 | 5.250 | 5.450 | 1.400 | 1.400 |
| CP(T)- 74/02/28 | 24 00 | | | | | | | | |
| 74/03/31 | 00 00 | | 6.400 | 4.100 | 0.130 | 4.400 | 5.500 | 1.200 | 1.300 |
| CP(T)- 74/03/31 | 24 00 | | | | | | | | |
| 74/04/30 | 00 00 | | 1.040 | 23.000 | 8.800 | 9.800 | 11.000 | 1.300 | 1.400 |
| CP(T)- 74/04/30 | 24 00 | | | | | | | | |
| 74/06/03 | 00 00 | | 5.400 | 1.300 | 0.110 | 3.130 | 3.600 | 2.000 | 1.300 |
| CP(T)- 74/06/03 | 24 00 | | | | | | | | |

STORET RETRIEVAL DATE 76/09/09

472388 AS472388 P016982
35 49 22.0 086 24 58.0 4
MURFREESBORO #2
47 7.5 MURFREESBORO
T/J PERCY PRIEST RESERVO 052091
WEST FORK STONES RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 74/06/29 | 08 00 | | | | | | | | |
| CP(T)- | | | 1.240 | 20.500 | 7.000 | 8.400 | 10.500 | 1.470 | 2.970 |
| 74/06/30 | 08 00 | | | | | | | | |

101

STORET RETRIEVAL DATE 76/09/09

4723EA AS4723EA P000408
36 03 27.0 086 33 17.0 4
LA VERGNE
47 7.5 LA VERGNE
T/J PERCY PRIEST RESERVO 052091
HURRICANE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/06/07 | 11 00 | | 4.200 | 0.500 | 0.019 | 2.200 | 2.700 | 0.032 | 0.060 |
| CP(T)- 73/06/07 | 16 00 | | | | | | | | |
| 73/07/05 | 11 00 | | 7.900 | 0.160 | 0.160 | 12.000 | 12.500 | 0.017 | 0.021 |
| CP(T)- 73/07/05 | 16 00 | | | | | | | | |
| 73/08/06 | 11 00 | | 7.900 | 2.520 | 0.080 | 6.200 | 10.000 | 0.013 | 0.016 |
| CP(T)- 73/08/06 | 16 00 | | | | | | | | |
| 73/09/06 | 11 00 | | 17.500 | | 0.740 | | | 0.013 | 0.013 |
| CP(T)- 73/09/06 | 16 00 | | | | | | | | |
| 73/10/05 | 11 00 | | 25.000 | 2.000 | 0.530 | 3.600 | 15.000 | 0.013 | 0.014 |
| CP(T)- 73/10/05 | 16 00 | | | | | | | | |
| 73/11/08 | 11 00 | | 24.000 | 1.200 | 0.042 | 11.000 | 11.500 | 0.013 | 0.013 |
| CP(T)- 73/11/08 | 16 00 | | | | | | | | |
| 73/12/04 | 11 00 | | 5.000 | 0.500K | 0.037 | 3.050 | 3.100 | 0.053 | 0.018 |
| CP(T)- 73/12/04 | 16 00 | | | | | | | | |
| 74/01/07 | 11 00 | | 3.500 | 1.500 | 0.040K | 1.520 | 1.700 | 0.015 | 0.020 |
| CP(T)- 74/01/07 | 16 00 | | | | | | | | |
| 74/02/04 | 11 00 | | 2.320 | 1.500 | 0.043K | 1.000 | 1.250 | 0.010 | 0.015 |
| CP(T)- 74/02/04 | 15 30 | | | | | | | | |
| 74/03/05 | 11 00 | | 9.900 | 5.700 | 0.057 | 6.000 | 6.600 | 0.002 | 0.003 |
| CP(T)- 74/03/05 | 16 00 | | | | | | | | |
| 74/05/07 | 11 00 | | 4.100 | 1.000K | 0.050 | 1.880 | 2.200 | 0.078 | 0.053 |
| CP(T)- 74/05/07 | 16 00 | | | | | | | | |
| 74/06/03 | 11 00 | | 5.800 | 5.000 | 0.081 | 2.150 | 2.400 | 0.028 | 0.021 |
| CP(T)- 74/06/03 | 16 00 | | | | | | | | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

4723FA AS4723FA P000000*
36 01 42.0 086 34 50.0 4
HURRICANE CREEK PLANT
47 7.5 LA VERGNE
T/J PERCY PRIEST RESERVO 052091
HURRICANE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/09/04 | 09 | 00 | 3.360 | 0.400 | 0.075 | 2.400 | 2.600 | 0.250 | 0.250 |
| 73/09/05 | 10 | 00 | 2.620 | 2.260 | 0.230 | 5.800 | | | 0.200 |
| 73/10/02 | 09 | 00 | 5.100 | 1.050 | 0.037 | 3.225 | 3.375 | | |
| 73/11/06 | 09 | 00 | 2.730 | 0.500K | 0.066 | 1.200 | 1.650 | | 0.200 |
| 73/12/12 | 10 | 00 | 1.150 | 1.200 | 0.018 | 2.200 | 2.400 | | |
| 74/01/02 | 10 | 00 | 0.160 | 0.810 | 0.100 | 0.340 | 0.470 | 0.716 | 0.615 |
| 74/02/01 | 10 | 00 | 0.760 | 1.000K | 0.051 | 0.350 | 0.790 | 1.140 | 0.865 |
| 74/03/01 | 10 | 00 | 0.960 | 1.300 | 0.050K | 0.710 | 0.780 | 1.120 | 1.090 |
| 74/04/01 | 10 | 00 | 0.480 | 1.000K | 0.050K | 0.300 | 0.450 | 1.110 | 1.120 |
| 74/05/02 | 10 | 00 | 1.000 | 1.200 | 0.067 | 0.740 | 0.790 | 1.140 | 1.130 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

4723GA AS4723GA P006934
35 59 30.0 086 30 50.0 4
SMYRNA #1
47 7.5 SMYRNA
T/J PERCY PRIEST RESERVO 052091
HARTS BRANCH/STEWART CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/06/14 | 08 | 00 | 15.200 | 1.825 | 0.155 | 14.130 | 14.400 | 0.310 | 0.335 |
| 73/07/14 | 08 | 00 | 16.000 | 0.390 | 0.078 | 13.700 | 14.000 | 0.390 | 0.365 |
| 73/08/16 | 08 | 00 | 9.780 | 1.100 | 0.080 | 10.800 | 10.800 | 0.425 | 0.394 |
| 73/09/13 | | | 15.300 | 1.400 | 0.120 | 15.200 | 15.500 | 0.445 | 0.400 |
| 73/10/16 | 08 | 00 | 20.000 | | 0.016 | 14.500 | 17.600 | 0.444 | 0.406 |
| 73/11/15 | 08 | 00 | 19.400 | 2.410 | 0.025 | 15.000 | 17.000 | 0.300 | 0.265 |
| 74/01/29 | 08 | 00 | | 2.600 | 0.490 | 2.320 | 2.600 | 0.841 | 0.525 |
| 74/02/14 | 08 | 00 | 17.000 | 1.000K | 0.054 | 14.000 | 15.700 | 0.611 | 0.580 |
| 74/03/15 | 08 | 00 | | 1.000K | 0.050K | | 13.500 | 0.480 | 0.520 |
| 74/03/16 | 00 | 00 | | | | | | | |
| CP(T)- | | | 17.600 | 1.000K | 0.060 | 15.000 | 15.000 | 0.456 | 0.500 |
| 74/03/16 | 24 | 00 | | | | | | | |
| 74/04/17 | 08 | 00 | 17.000 | 1.000K | 0.050K | 13.000 | 17.000 | 0.500 | 0.650 |
| 74/05/20 | 08 | 00 | 16.000 | 1.800 | 0.100 | 11.000 | 13.000 | 0.360 | 0.450 |
| 74/06/13 | 08 | 00 | 12.600 | 1.000K | 0.050K | 8.700 | 8.700 | 0.500 | 0.500 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/09

4723XA AS4723XA P0049B3
36 05 18.0 086 37 15.0 4
NASHVILLE/SMITH SPRING PLANT
47 7.5 LA VERGNE
T/J PERCY PRIEST RESERVO 052091
E FK HAMILTON CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/09/04 | 09 | 00 | 0.060 | 26.000 | | | 17.000 | 0.500 | 0.500 |
| 73/09/06 | 10 | 00 | 0.033 | 32.400 | | | | 0.500 | 0.500 |
| 73/10/01 | 09 | 00 | 0.270 | 36.000 | 6.200 | 10.050 | 11.500 | 0.237 | 0.223 |
| 73/11/06 | 09 | 00 | 15.000 | 2.800 | 0.160 | 12.400 | 13.600 | 0.544 | 0.380 |
| 73/12/12 | 10 | 00 | 16.800 | 1.200 | 0.084 | 11.600 | 15.000 | 1.450 | 0.600 |
| 74/01/02 | 10 | 00 | 6.300 | 1.700 | 0.069 | 5.040 | 6.000 | 0.416 | 0.526 |
| 74/02/01 | 10 | 00 | 0.080 | 8.000 | 0.490 | 6.500 | 7.200 | 0.750 | 0.750 |
| 74/03/01 | 10 | 00 | 8.000 | 1.200 | 0.059 | 6.700 | 8.300 | 0.750 | 0.750 |
| 74/04/01 | 10 | 00 | 8.400 | 3.300 | 0.100 | 6.500 | 9.100 | 0.750 | 0.750 |
| 74/05/01 | | | 0.360 | 16.000 | 3.800 | 9.400 | 11.000 | 0.750 | 0.750 |
| 74/09/30 | 10 | 00 | 0.240 | 14.000 | 5.900 | 8.750 | 9.300 | 0.600 | 0.600 |

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# APPENDIX E

## PARAMETRIC RANKINGS OF LAKES SAMPLED BY NES IN 1974

## STATE OF TENNESSEE

LAKE DATA TO BE USED IN RANKINGS

| LAKE CODE | LAKE NAME | MEDIAN TOTAL P | MEDIAN INO-G N | DOO-MEAN SEC | MEAN CHLORA | 1D-MIN DO | MEDIAN DISS ORTHO P |
|---|---|---|---|---|---|---|---|
| 4701 | LAKE BARKLEY | 0.128 | 0.480 | 473.381 | 12.723 | 10.400 | 0.047 |
| 4704 | BOONE RESERVOIR | 0.052 | 0.995 | 442.071 | 11.415 | 14.000 | 0.029 |
| 4706 | CHEATHAM RESERVOIR | 0.142 | 0.460 | 473.800 | 8.160 | 9.600 | 0.064 |
| 4707 | CHEROKEE LAKE | 0.051 | 0.780 | 448.667 | 12.162 | 15.000 | 0.022 |
| 4708 | CHICKAMAUGA LAKE | 0.031 | 0.440 | 463.833 | 3.111 | 9.600 | 0.012 |
| 4711 | DOUGLAS LAKE | 0.026 | 0.440 | 442.823 | 4.553 | 15.000 | 0.014 |
| 4712 | FORT LOUDON RESERVOIR | 0.054 | 0.550 | 465.571 | 4.776 | 12.600 | 0.025 |
| 4713 | GREAT FALLS LAKE | 0.020 | 0.405 | 444.417 | 3.983 | 14.800 | 0.007 |
| 4717 | NICKAJACK RESERVOIR | 0.051 | 0.495 | 459.833 | 2.742 | 9.700 | 0.025 |
| 4720 | OLD HICKORY LAKE | 0.058 | 0.330 | 469.769 | 8.931 | 9.400 | 0.019 |
| 4722 | WATTS BAR RESERVOIR | 0.032 | 0.510 | 462.250 | 5.550 | 11.000 | 0.012 |
| 4723 | J. PERCY PRIEST RESERVOI | 0.056 | 0.155 | 430.200 | 9.993 | 15.000 | 0.021 |
| 4724 | TIM'S FORD RESERVOIR | 0.021 | 0.445 | 398.167 | 6.739 | 14.900 | 0.009 |
| 4725 | SOUTH HOLSTON LAKE | 0.014 | 0.570 | 404.750 | 7.667 | 15.000 | 0.008 |
| 4727 | REELFOOT LAKE | 0.233 | 0.170 | 477.917 | 80.958 | 13.200 | 0.059 |
| 4728 | WOODS RESERVOIR | 0.017 | 0.320 | 429.083 | 7.392 | 15.000 | 0.005 |

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PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

| LAKE CODE | LAKE NAME | MEDIAN TOTAL P | MEDIAN INORG N | 500- MEAN SEC | MEAN CHLORA | 15- MIN DO | MEDIAN DISS ORTHO P | INDEX NO |
|---|---|---|---|---|---|---|---|---|
| 4701 | LAKE BARKLEY | 13 ( 2) | 40 ( 6) | 13 ( 2) | 7 ( 1) | 73 ( 11) | 13 ( 2) | 159 |
| 4704 | BOONE RESERVOIR | 40 ( 6) | 0 ( 0) | 73 ( 11) | 20 ( 3) | 47 ( 7) | 20 ( 3) | 200 |
| 4706 | CHEATHAM RESERVOIR | 7 ( 1) | 47 ( 7) | 7 ( 1) | 40 ( 6) | 90 ( 13) | 0 ( 0) | 191 |
| 4707 | CHEROKEE LAKE | 50 ( 7) | 7 ( 1) | 53 ( 8) | 13 ( 2) | 13 ( 0) | 40 ( 6) | 176 |
| 4708 | CHICKAMAUGA LAKE | 67 ( 10) | 63 ( 9) | 33 ( 5) | 93 ( 14) | 90 ( 13) | 70 ( 10) | 416 |
| 4711 | DOUGLAS LAKE | 73 ( 11) | 63 ( 9) | 67 ( 10) | 80 ( 12) | 13 ( 0) | 60 ( 9) | 356 |
| 4712 | FORT LOUDON RESERVOIR | 33 ( 5) | 20 ( 3) | 27 ( 4) | 73 ( 11) | 60 ( 9) | 27 ( 4) | 240 |
| 4713 | GREAT FALLS LAKE | 87 ( 13) | 73 ( 11) | 60 ( 9) | 87 ( 13) | 40 ( 6) | 93 ( 14) | 440 |
| 4717 | NICKAJACK RESERVOIR | 50 ( 7) | 33 ( 5) | 47 ( 7) | 100 ( 15) | 80 ( 12) | 33 ( 5) | 343 |
| 4720 | OLD HICKORY LAKE | 20 ( 3) | 80 ( 12) | 20 ( 3) | 33 ( 5) | 100 ( 15) | 53 ( 8) | 306 |
| 4722 | WATTS BAR RESERVOIR | 60 ( 9) | 27 ( 4) | 40 ( 6) | 67 ( 10) | 67 ( 10) | 70 ( 10) | 331 |
| 4723 | J. PERCY PRIEST RESERVOI | 27 ( 4) | 100 ( 15) | 80 ( 12) | 27 ( 4) | 13 ( 0) | 47 ( 7) | 294 |
| 4724 | TIM'S FORD RESERVOIR | 80 ( 12) | 53 ( 8) | 100 ( 15) | 60 ( 9) | 33 ( 5) | 80 ( 12) | 406 |
| 4725 | SOUTH HOLSTON LAKE | 100 ( 15) | 13 ( 2) | 93 ( 14) | 47 ( 7) | 13 ( 0) | 87 ( 13) | 353 |
| 4727 | REELFOOT LAKE | 0 ( 0) | 93 ( 14) | 0 ( 0) | 0 ( 0) | 53 ( 8) | 7 ( 1) | 153 |
| 4728 | WOODS RESERVOIR | 93 ( 14) | 87 ( 13) | 87 ( 13) | 53 ( 8) | 13 ( 0) | 100 ( 15) | 433 |